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Apr 95

June 24 '95

INDIANA  
WEATHER SERVICE.

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THE AGRICULTURAL EXPERIMENT STATION

AT

PURDUE UNIVERSITY

CO-OPERATING WITH

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

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APRIL 1895.

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H. A. HUSTON, DIRECTOR.

Purdue University, LaFayette, Ind.

C. F. R. WAPPENHANS, Local Forecast Official Weather Bureau, Assistant Director.

Reports and all communications from Observers relating to the State Weather Service should be addressed, under the frank, to "C. F. R. WAPPENHANS, Local Forecast Official Weather Bureau, Indianapolis, Ind."

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## APRIL, 1895.

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Exceedingly warm and dry weather continued during the month; the daily mean temperature was below normal only on few days. The maximum temperature ranging from 79 degrees in the northern portion to 96 degrees in the southern were noted on the 29th and 30th, and the minimum temperatures, ranging from 22 to 34 degrees on the 3d. The average temperature for the State, 54.4 degrees, is 2 degrees above the normal, and an excess in temperature is noted in all portions of the State. The excess in temperature in the northern and central portions is 2.2 degrees; in the northern portion the local excess ranged from 0.9 to 4.1 degrees, and in the central portion from 1.1 to 3.1 degrees; in the southern portion the excess is 1.5 degree, with the excess at the different stations ranging from 0.3 to 3.2 degrees. The highest monthly means of temperature for any month of April on record, ranging from 52.2 to 61.3 degrees, were computed in the southern portion in the year 1891, in the central portion at most stations in the year 1891, but at a few stations in 1895, and in the northern portion everywhere in the year 1886; the lowest monthly means, ranging from 40.6 to 55.5 degrees, were recorded in the southern and central portions, at most stations in the year 1884, and in the northern portion in various years. The highest temperatures ever observed in April, ranging from 84 to 96 degrees, were noted at most stations in the year 1894, a few in 1895, and the lowest temperature, ranging from 8 to 26 degrees, were recorded in various years.

Hoar-frosts were quite frequent, but did little injury only.

Precipitation fell only on few days in small quantities, and the average amount for the State, 2.24 inches, is 1.36 below the normal. The total amounts at the various stations of observation ranged from 0.51 to 4.65 inches, and the greatest amounts in any consecutive 24 hours, ranging from 0.12 to 1.50 inch, fell on the 7th and 8th at most stations. A deficiency in precipitation is noted in all parts of the State; the greatest, 1.53 inch. in the southern portion, with the deficiencies at the different stations ranging from 0.33 to 2.54 inches; in the northern portion the deficiency is 1.47 inch, with deficiencies ranging from 1.11 to 2.13 inches; the least deficiency, 1.15 inch, is noted in the central portion, where the local deficiencies ranged from 0.47 to 2.18 inches. The greatest amounts of monthly precipitation, ranging from 7.19 to 12.60 inches, were

recorded in the year 1893 everywhere, and the least amounts, ranging from 0.27 to 2.75 inches, at most stations in 1889, and at a few stations in 1895.

Snow fell only on two days in small quantities.

Moderate thunder storms formed on several days in localities.

The warm, fair weather was very favorable to farm work, but continuing so dry, crops did not advance much; water was scarce in many localities, and rain in sufficient quantities much needed everywhere. At the end of the month wheat is in good condition and corn planting had advanced with the ground in good condition, but in some counties some farmers delayed planting for fear of ravages by cut and army worms. Fruit trees, except peaches, were full of bloom.

W.



## OBSERVERS' REMARKS.

MADISON, Jefferson Co.—Very dry weather continued during the month; at its end plowing for corn is well under way and much has been planted; oats are all sown; wheat looks promising and a very large crop of potatoes has been planted and some fields have been plowed. There are plenty of apples and pears, but no cherries. Garden truck is plentiful. Pasturage is in good condition. A great amount of tobacco plants are in good condition.

CAMBRIDGE CITY, Wayne Co.—The weather was very favorable to farm-work. Oats look well, but grass and everything needs rain. Corn planting proceeds rapidly. Wheat, at the end of the month, promises two-thirds of a crop, with an average almost equal to last year's crop. Pear and apple trees are full of bloom; there are some signs of cherries, but no peaches. A new variety of weed has made its appearance in Wayne county that threatens the strawberry crop in places; it is thick among the plants. It is a bush plant 6 or 7 inches high, with small white flowers, large top, and it has a long tap root like clover.

VEVAY, Switzerland Co.—The month of April has been one of the most delightful on record; there was an entire absence of disastrous storms, severe frosts or floods; nature has never appeared more charming than at present. All crops are promising at the end of the month except pears, which are in this locality a failure. The prospect for fruit and vegetables exceeds any of former years. The deficiency of rain in the early stage of the season appeared threatening, but with heavy dews at nights everything recovered and promised good results.

SEYMOUR, Jackson Co.—The weather during the month of April was unseasonable, warm and dry. Rain is badly needed, although few crops are yet suffering. At the end of the month the condition of winter wheat is excellent, and the promise is fair for a good crop. Other crops, some fruit excepted, are in fair condition. Corn planting is in progress.

WORTHINGTON, Green Co.—The drouth has prevented the rapid growth of wheat, oats and grass, but these crops are doing fairly well. Pasturage and meadows are rather slow. The latter part of the month it was warm and there was too little rainfall. The prospect for an abundant crop of apples, plums and grapes was never better; peaches are a failure.

DELPHI, Carroll Co.—There is at the end of the month a very great deficiency in rainfall; creeks and branches are low, and there is a general complaint of scarcity of water. Grass is growing, but gardens are very backward.

MARION, Grant Co.—The rainfall has been very deficient and rain is much needed for wheat and all other growing crops; otherwise the weather has been favorable to farm-work. Much corn is planted and planting is being pushed rapidly.

COLUMBIA CITY, Whitley Co.—The close of the month finds the trees in leaf and apple and cherry trees in full bloom, quite unusual for this latitude. The weather was phenomenally warm near the end of the month. The unprecedented drouth continues; there have been only 4.15 inches of precipitation since January 1st, 1895, about one month's normal precipitation.

SOUTH BEND, St. Joseph Co.—Wheat and grass are suffering for rain at the end of the month; oats are up and early potatoes are all planted. Apple, pear, plum and cherry trees are white with bloom; small fruit look well except some fields of raspberries which were winter killed.

FARMLAND, Randolph Co.—Much corn had been planted by the end of the month, and fruit trees were in bloom promising a fair crop. Wheat is improving, but rain is needed.

PRINCETON, Gibson Co.—During the first half of the month it was quite cool. Wheat at the end of the month looks quite well; pasturage is in good condition. Corn planting is only fairly begun. The prospect is very good for all fruit except peaches and cherries. Rain is badly needed; many wells and cisterns are low. Stock is generally in good condition.

DEGONIA SPRINGS, Warrick Co.—Wheat looks well at the end of the month. Cut worms and army worms are plentiful, but it is too early to estimate the probable amount of injury done to crops by them.

ANGOLA, Steuben Co.—The fore part of the month it was cool and generally the month was dry; the least precipitation was recorded during any month of April for many years; the lakes are lower than at any time and wells are failing. Wheat in some fields does not look well, the ground is bare in many places. Oats are all sown.

MAUZY, Rush Co.—On the 21st saw chimney swallows, on the 25th whippoorwill, on the 27th barn swallows.

KOKOMO, Howard Co.—Cherries were in bloom on the 23d.



## STATE SUMMARY.

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 APRIL, 1895.
 

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TEMPERATURE (deg. Fah.)—Monthly mean 54.4; highest monthly mean, 61.6 at Cannelton; lowest monthly mean, 50.0 at Angola; maximum observed 96 at Evansville on the 30th; minimum, observed 22 at Plymouth on the 3d. Range for State, 74; mean monthly range, 57; greatest local monthly range, 65 at Evansville; least monthly range, 50 at Seymour and Edwardsville.

PRECIPITATION (in inches): Average for State 2.24, greatest amount 4.65 at Marengo; least amount 0.51 at Hammond.

WIND.—(Prevailing direction,) S. W.

THUNDERSTORMS (dates of): 1, 5, 6, 8, 12, 13, 16, 20, 21, 22, 26.

HAIL (dates of): 1 at LaFayette: 2 Butlerville; 12 Jasper, Scottsburg, Seymour.

SNOW (dates of): 1, 2.

DENSE FOG.—(dates of): 1, 14.

KILLING FROSTS (dates of): 1, 2, 3, 4, 5, 15, 22.

LIGHT FROSTS (Dates of): 3, 4, 5, 7, 10, 11, 14, 15, 18, 19, 20, 21, 22.

SOLAR HALOS.—5, 16, 17.

LUNAR HALOS.—3, 7.

PLACE OF OBSERVATION.			TEMPERATURE—DEG. FAH.				PRECIPITATION.					NUMBER OF DAYS			NAME OF OBSERVER				
STATION.	COUNTY.	Altitude Above Sea in Feet.	Latitude North.	Longitude West.	Monthly Mean.	MAXIMUM	MINIMUM	Monthly Range.	Total for month including snow.	Am't.	Date	Greatest in 24 consecutive hrs.	Snow Fall Inches	Prevailing direction of winds.		Cloudless	Partly Cloudy	Cloudy.	On which Rain or Snow Fell.
						Degrees.	Date.	Degrees.	Date.										
SOUTHERN.																			
Huntingburg.	Dubois	b 1	430 38° 21'	86° 59'	57.0	90	29-30	29	4	61	2.67	0.75	16	0	....	15	7	8	C. R. Kluger.
Mt. Vernon.	Posey	b 1	410 37° 58'	87° 54'	58.4	87	25	35	3	52	2.10	0.45	7	0	S	15	5	10	Manuel Cronback
Laconia.	Harrison	a	.... 38° 03'	86° 08'	59.1	85	29	29	4	56	3.55	1.25	16	..	S	15	5	10	Lafe Crozier.
Jasper.	Dubois	b 1	450 38° 25'	86° 58'	58.0	88	30	29	4	59	3.49	0.62	16	0	.....	8	8	14	Gus Gramelspacher
Princeton.	Gibson	a b	481 38° 23'	87° 35'	56.3	88	30	30	3	58	2.25	0.75	1	0	E	18	7	5	Elisha Jones.
Marengo	Crawford	a	363 38° 24'	86° 24'	57.4	86	30	31	4	55	4.65	1.50	12	T	SW	13	6	11	J. M. Johnson.
Vevay.	Switzerland	a b 1	525 38° 46'	84° 59'	58.0	85	30	30	15	55	0.99	0.30	6	0	SW	14	5	11	Chas. G. Boerner.
Butlerville.	Jennings	b 1	767 39° 3'	85° 33'	55.7	86	29	28	3-15	58	1.70	0.73	1	0	NE	14	7	9	C. F. Hole.
Worthington.	Greene	b c 1	540 39° 9'	87° 0'	54.1	86	30	28	3	58	3.60	1.24	8	T	SW	12	11	7	Dr. W. B. Squire.
Bedford.	Lawrence	b 1	681 38° 52'	86° 31'	56.1	85	26-30	29	3	56	3.05	0.90	2	..	N	18	2	13	John Johnson, Jr.
Seymour	Jackson	b 1	610 38° 45'	86° 31'	54.8	84	25	34	2	50	1.77	0.42	8	0	NW	11	12	7	John A. Forsythe.
Columbus.	Bartholomew	b 1	632 39° 13'	85° 56'	53.8	85	30	29	3-15	56	1.60	0.68	8	0	SW	15	4	11	J. A. Perry.
Degonia Spg's	Warrick	3	329 38° 6'	87° 12'	57.9	85	30	32	3	53	2.76	0.73	16	0	....	10	15	15	Jas. P. White.
Jeffersonville	Clark	a b 1	455 38° 16'	85° 45'	57.4	85	30	34	15	51	2.75	0.98	16	0	NW	12	8	10	John C. Loomis.
Edwardsville.	Floyd	a b 1	901 38° 19'	85° 56'	59.6	84	29-30	34	3	50	3.53	0.98	26	0	E	12	9	11	Jonathan Beard.
Sunman	Ripley	3	1018 39° 14'	85° 6'	54.4	83	25	26	3	57	2.37	0.65	1	T	SW	8	12	10	B. F. Farris.
Evansville	Vanderburg.	b 1	383 38° 00'	87° 38'	58.3	96	30	31	3	65	2.25	0.66	27	..	.....	16	0	14	Lewis J. Ahlering.
Vincennes.	Knox	b 1	431 38° 47'	87° 33'	58.7	89	30	28	3	61	3.03	0.87	7	0	.....	18	0	12	J. T. McJinsey.
Madison	Jefferson.	b 1	460 38° 44'	85° 27'	56.6	86	29	32	3-15	54	2.52	0.99	1	0	NE	14	8	10	W. P. Goswell.
Scottsburg.	Scott.	a	570 38° 42'	85° 41'	54.0	88	30	34	3	54	2.30	0.48	8	0	SW	11	9	10	F. H. Park.
Cannelton.	Perry	b 1	.... 37° 55'	86° 45'	61.6	90	29	30	3	60	2.70	0.80	8	0	.....	16	4	10	T. E. Huston.
MEAN.																			
CENTRAL.																			
Franklin.	Johnson	a	740 39° 30'	86° 13'	54.7	86	30	33	3	53	1.76	0.52	7	T	SW	13	7	10	D. A. Owen.
Connorsville.	Fayette	b 1	844 39° 40'	85° 3'	52.1	82	25-30	27	3	55	1.79	0.35	7-8	0	NE	10	16	4	H. Hess.
Shelbyville.	Shelby	b b 1	774 39° 33'	85° 50'	55.0	85	30	29	2	56	1.72	0.45	7	0	.....	..	..	..	S. B. Morris.
Indianapolis	Marion	b c 1	766 39° 47'	86° 11'	55.2	85	30	31	3	54	1.96	0.91	7-8	0.2	NE	6	13	11	C. F. R. Wappenhans.



Mauzy .....	Rush .....	b 1	980	39° 38' 85" 24"	53.2	83	30	25	3	58	1.23	0.23	8	T	.....	..	..	9	E. K. Wood.
Camb'ge City .....	Wayn .....	b 1	39° 53' 85" 14"	51.9	82	30	26	3	56	1.61	0.30	8	T	N E	12	8	10	9	Rev. E. Spelman.
Ashboro .....	Clay .....	b 1	39° 24' 87" 7	55.4	89	30	26	3	63	3.59	0.34	8	.....	.....	22	0	8	6	J. T. Moss.
Rockville .....	Parke .....	bb 1	722 39° 46' 87" 19"	54.9	87	30	25	3	62	3.52	0.55	8	.....	.....	..	..	..	9	Dr. W. N. Wirt.
Farmland .....	Randolph .....	b 1	1101 40° 11' 85" 10"	52.9	81	25-30	26	2	55	1.23	0.27	7	0.6	.....	12	10	8	7	W. J. Davisson.
*Muncie .....	Delaware .....	b 1	960 40° 11' 85" 25"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	Stevens & Durham.
Terre Haute .....	Vigo .....	b 1	498 39° 29' 87" 28"	57.2	89	30	30	3	59	4.37	1.68	8	T	N	16	5	9	10	R. G. Gillum.
Lyford .....	Parke .....	b 1	39° 39' 87" 29"	.....	87	30	.....	.....	.....	4.28	.....	.....	.....	S	.....	.....	.....	..	Dr. Geo. E. Walton
Mean .....	.....	.....	.....	54.2	85	.....	28	.....	57	2.46	0.76	.....	.....	0.1	N E	13	9	8	.....
NORTHERN.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
LaFayette .....	Tippecanoe .....	b c 1	661 40° 27' 86" 55"	54.1	88	30	25	3	63	2.21	0.72	21-22	0.7	N E	10	13	7	10	H. A. Huston.
Delphi .....	Carroll .....	c b 1	668 40° 36' 86" 41"	54.8	90	30	26	3	64	1.97	0.60	8	0.2	.....	5	14	11	10	Higginbotham & Son
Marion .....	Grant .....	b 1	814 40° 29' 85" 41"	52.3	84	30	26	3	58	1.71	0.73	22	0.5	SW	12	10	8	10	James F. Hood.
Kokomo .....	Howard .....	a b	840 40° 33' 86" 8"	52.3	84	25	29	3	55	1.88	0.74	21	0	SE	6	13	11	6	Dr. T. C. Hunter.
Columbia City .....	Whitley .....	a	841 41° 9' 85" 30"	52.4	85	30	26	3	59	1.03	0.47	21	2.0	.....	15	6	9	5	Dr. N. I. Kithcart.
Angola .....	Steuben .....	a b	1052 41° 37' 85" 1"	50.0	82	29	25	3	57	1.09	0.43	21	2.0	SE	12	11	7	5	L. Stealy.
Logansport .....	Cass .....	b 1	620 40° 50' 86" 21"	54.9	85	29	30	3	55	1.54	0.37	7	1.0	.....	7	12	11	9	D. E. Pryor.
Topeka .....	La Grange .....	b 1	737 41° 38' 85" 33"	50.9	84	30	23	3	61	1.37	0.42	30	3.0	SW	12	13	5	7	J. C. Young.
Valparaiso .....	Porter .....	b 1	737 41° 32' 87" 2"	50.9	84	30	29	15	55	1.95	0.75	1	T	NW	8	16	6	6	J. N. Roe.
Hannond .....	Lake .....	b 1	41° 44' 87" 25"	50.3	79	25	28	14	51	0.51	0.12	7	T	.....	17	7	6	8	C. W. Whitney.
Rensselaer .....	Jasper .....	b 1	668 41° 8' 87" 10"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Huntington .....	Huntington .....	b 1	741 40° 53' 85" 29"	52.5	84	25-30	28	2	56	0.85	0.42	21	1.0	E	13	12	5	6	David W. Shields.
South Bend .....	St. Joseph .....	b 1	726 41° 36' 86" 16"	51.3	86	30	25	3	61	1.06	0.30	.....	T	SW	9	15	6	9	Wm. McGrew.
Plymouth .....	Marshall .....	b 1	781 41° 22' 86" 20"	.....	.....	.....	22	3	.....	2.20	0.74	2	6.8	.....	.....	.....	.....	.....	.....
Sciotoville .....	Clinton .....	b 1	40° 17' 86" 15"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	J. Swindell Bros.
Mean .....	.....	.....	.....	52.2	85	.....	26	.....	58	1.60	0.58	.....	.....	1.4	SW	11	12	7	.....
Northern Counties .....	.....	.....	.....	52.2	85	.....	26	.....	58	1.60	0.58	.....	.....	1.4	SW	11	12	7	.....
Central Counties .....	.....	.....	.....	54.2	85	.....	28	.....	57	2.46	0.76	.....	.....	0.1	N E	13	9	8	.....
Southern Counties .....	.....	.....	.....	56.9	87	.....	31	.....	66	2.65	0.80	.....	T	SW	13	7	10	8	.....
State .....	.....	.....	.....	54.4	86	.....	28	.....	57	2.24	0.71	.....	.....	0.5	SW	12	10	8	.....

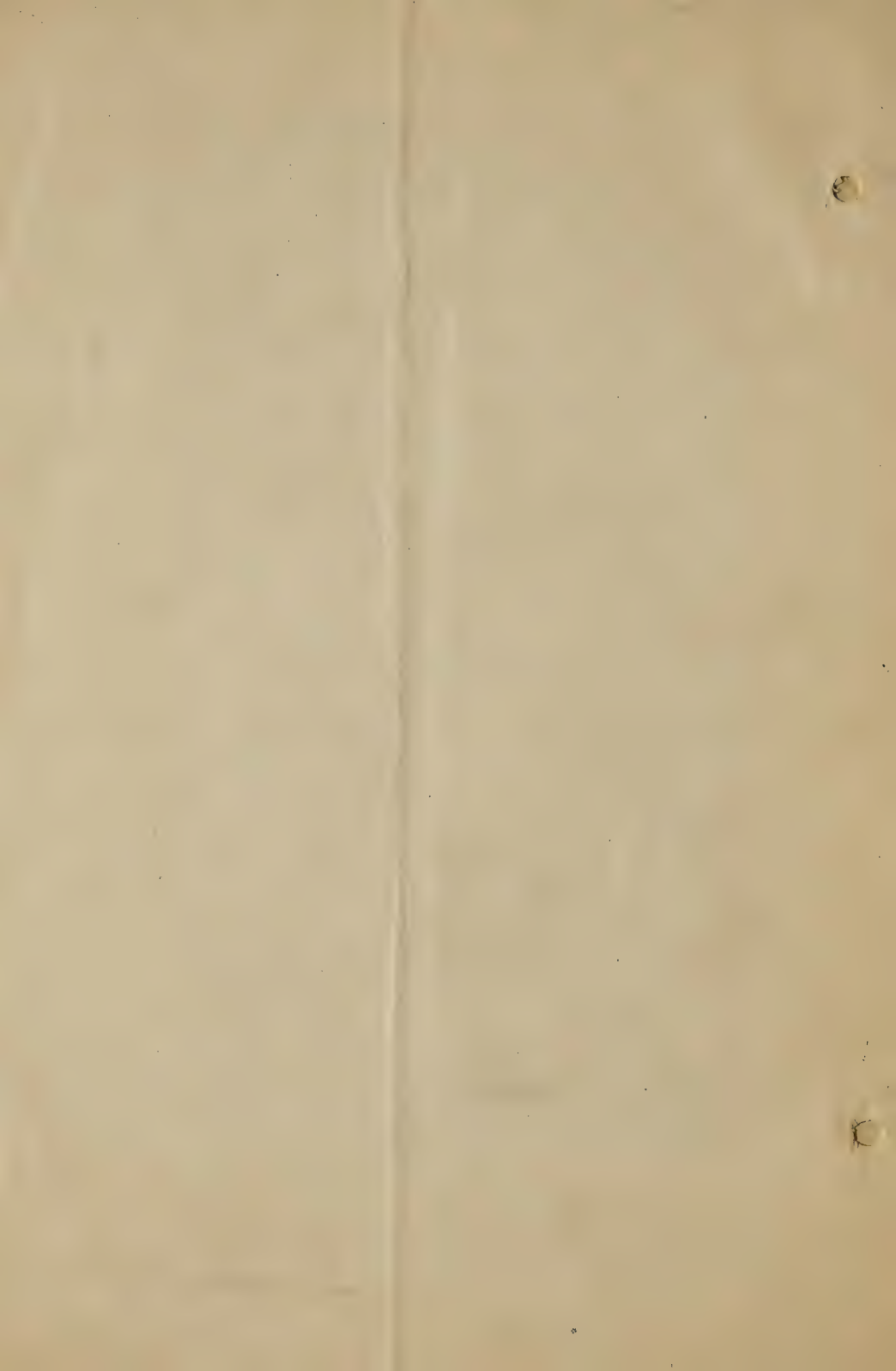
The time noted herein is that of the 90th meridian. Wherever Self-Registering thermometers (b) are used the extremes of temperature are noted from these, elsewhere from observed readings. The different hours from which the monthly means are obtained, are indicated by 1, from maximum and minimum observations; 2, from the 7 a. m. and 7 p. m. observations; 3, from the 7 a. m., 2 p. m., and 9 p. m. observations; and 4, from observations of other hours. a. Observations are taken at 7 p. m., 2 p. m. and 9 p. m. b. Maximum and minimum. c. At 7 a. m. and 7 p. m. d. Indicates that observations on Sunday are not made.

# COMPARATIVE TEMPERATURE AND PRECIPITATION FOR APRIL, 1895.

COUNTIES.	STATIONS.	TEMPERATURE—DEGREES—FAHRENHEIT.										PRECIPITATION—INCHES.									
		Number of Years	Normal.	Highest Mean on Record.	Year.	Lowest Mean on Record.	Year.	Highest.	Year.	Date of Month.	Lowest.	Year.	Date of Month.	Departure from the Normal.	Number of Years	Normal.	Highest.	Year.	Lowest.	Year.	Departure from the Normal.
SOUTHERN.....	.....	12	55.4	58.6	1888	51.5	1884	96	1895	30	12	1875	17	+1.5	12	4.18	9.06	1893	0.98	1889	-1.53
Dubois .....	Huntingburg .....	13	56.2	61.3	1891	49.5	1884	90	1891 1895	21 29-30	20	1887	1	+0.8	13	4.55	12.60	1892	0.55	1889	-1.88
Gibson .....	Princeton. ....	13	54.7	56.6	1891	51.8	1884	91	1894	22-29	20	1887	1	+1.6	13	3.43	8.64	1893	0.80	1889	-1.18
Crawford .....	Marengo .....	14	56.9	59.4	1891	52.3	1884	91	1894	30	19	1887	1	+0.5	14	6.85	16.60	1893	0.60	1889	-2.20
Switzerland .....	Vevay .....	31	54.8	60.0	1878	47.4	1884	89	1887 1891	13 21	12	1875	17	+3.2	31	3.53	9.23	1893	0.98	1882	-2.54
Jennings.....	Butlerville. ....	11	54.5	56.7	1886	52.5	1892	90	1887	19	26	1880	6	+1.2	11	3.87	8.28	1893	1.21	1889	-2.17
Greene.....	Worthington ....	14	53.8	55.8	1886	50.9	1884	89	1894 1891	30 21	25	1891 1892	11	+0.3	14	3.93	8.45	1893	0.54	1889	-0.33
Jackson.....	Seymour .....	8	54.5	56.5	1891	52.7	1889	86	1894	28-30	27	1892	11	+0.3	8	3.90	9.22	1893	0.29	1889	-2.13
Bartholomew .....	Columbus.....	12	52.7	54.3	1891	50.2	1892	86	1883 1894	18 30	26	1887 1889	6 5	+1.1	12	3.26	8.70	1893	0.64	1889	-1.66
Warriek .....	Degonia Springs.	14	56.7	58.4	1890	52.4	1884	89	1891	14	23	1887	1	+1.2	14	4.22	8.79	1892	0.98	1889	-1.46
Posey.....	Mt. Vernon.....	8	56.9	60.2	1883	54.6	1892	90	1894	30	29	1892	10	+1.5	8	4.0	8.95	1893	1.98	1889	-1.92
Clark .....	Jeffersonville ....	6	56.9	58.1	1891	55.5	1894	87	1894	30	29	1892	11	+0.5	6	4.72	8.23	1893	2.75	1895	-1.97









551.5  
In 2  
May 16

INDIANA

CLIMATE AND CROP SERVICE

THE AGRICULTURAL EXPERIMENT STATION

AT

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WEATHER BUREAU

MAY. 1896.

H. A. HUSTON, DIRECTOR.

Purdue University, LaFayette, Ind.

C. F. R. Wappenhans, Local Forecast Official Weather Bureau, Assistant Director

Reports and all communications from Observers relating to the Indiana Climate and Crop Service should be addressed, under the frank to C. F. R. Wappenhans, Local Forecast. Official Weather Bureau, Indianapolis, Ind.

## MAY, 1896

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The month was the warmest month of May on record nearly everywhere in the State; the daily mean temperature was above the normal, except on or about three days, when there was a slight deficiency, and the monthly mean temperature was excessive everywhere. The local means of temperature ranged from 64.8 to 73.0 degrees, and the temperature normals for May from 60.0 to 65.8 degrees; the maximum temperatures, ranging from 85 to 96 degrees, were recorded nearly everywhere on the 9th and 10th, and the minimum temperatures, ranging from 44 to 54 degrees, were noted at most stations in the southern portion on the 3d and 15th, in the central portion on the 3d, and in the northern portion on the 29th at most stations. The average temperature for the State, 69.3 degrees, is 7.2 degrees above the normal; the local normals of temperature ranging from 60.0 degrees to 65.8 degrees. The greatest excess, 7.6 degrees, is noted in the northern portion, with the excess at the different stations ranging from 8.4 to 4.7 degrees; in the central portion the excess was 6.9 degrees, with local excesses ranging from 3.8 to 8.0 degrees, and in the southern portion the excess was 6.7 degrees, with local excesses ranging from 3.5 to 7.8 degrees. The highest monthly means of temperature, ranging from 66.5 to 72.8 degrees, were recorded at nearly all stations this year, at a few in 1887, and the lowest mean temperatures, ranging from 55.0 to 64.4 degrees, were recorded in different years; the highest temperature, ranging from 92 to 101 degrees, were recorded nearly everywhere in the year 1895, and the lowest, ranging from 25 to 37 degrees, were recorded in different years.

Rain fell in average on or about 11 days, and the total amounts were in excess at many stations. The local measurements ranged from 1.97 to 8.55 inches, and the greatest amounts in any consecutive 24 hours ranging from 0.44 to 3.95 inches, were recorded on the 19th and 25th at most stations. The average amount for the State, 4.50 inches, the normal being 4.23 inches, was 0.27 in excess; an excess occurred in the southern and northern portions, and in the central portion there was a slight deficiency. The smallest excess was in the northern portion, 0.11 inch, and the departures from the normal ranged from — 0.70 to + 2.65 inches; the excess in the southern portion, 0.92, was the largest, and the departures ranged from — 0.47 to + 4.77 inches; in the central portion there occurred a deficiency of 0.18 inch, with departures from the normal ranging from — 2.07 inches to — 0.87 inch. The local normals of precipitation range from 3.00 to 5.59 inches. The greatest monthly measurements of precipitation, ranging from 3.94 inches to 11.80 inches at different stations, were recorded at most stations in the years 1892



557.5  
In-  
Jug  
INDIANA

March 23, 1896.

# CLIMATE AND CROP SERVICE

THE AGRICULTURAL EXPERIMENT STATION

AT

PURDUE UNIVERSITY

CO-OPERATING WITH

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

JANUARY, 1896.

H. A. HUSTON, DIRECTOR.

Purdue University, LaFayette, Ind.

C. F. R. Wappenhans, Local Forecast Official Weather Bureau, Assistant Director

Reports and all communications from Observers relating to the State Weather Service should be addressed, under the frank to C. F. R. Wappenhans, Local Forecast, Official Weather Bureau, Indianapolis, Ind.





# JANUARY, 1896.

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The month of January was mild and dry, far different from that of last year; the temperature was below normal only about eight days during the first half of the month, the latter half there was an uninterrupted excess in temperature. The monthly mean temperature at the various stations ranged from 23.3 in the extreme northwestern portion to 36.1 degrees in the extreme southern portion. The maximum temperature, ranging from 48 to 60 degrees, were recorded at most stations on the 30th, and the minimum temperature, ranging from  $-14$  to 6 degrees above zero, were noted everywhere on the 4th. The mean temperature for the State, 29.8 degrees, is 3.6 degrees above the normal; the normal temperatures at the different stations of observation range from 22.5 to 34.2 degrees. An excess is noted in all portions of the State; the greatest, 3.3 degrees, in the northern portion, with departures from the normal ranging from  $-0.1$  to 5.3 degrees; in the central portion the excess is 3.1 degrees, and the local excesses ranged from 2.0 to 4.6 degrees, and the least excess occurred in the southern portion 2.9 degrees, with local excesses ranging from 0.4 to 4.9 degrees. The highest monthly means for any month of January on record, ranging from 26.6 to 49.9 degrees, were computed everywhere in the year 1890, and the lowest monthly means, ranging from 12.5 to 29.0 degrees, were computed in 1893. The maximum temperature in any month of January on record, ranging from 58 to 71 degrees, were recorded everywhere in the year 1890, and the maximum temperatures, ranging from  $-9$  to  $-33$  degrees, were noted in various years.

Precipitation occurred on few days only, most as rain, snow fell only to small depths on few days at the beginning of the month. The amounts of precipitation at the different stations ranged from 0.55 to 2.68 inches, and the greatest amounts of precipitation in any 24 consecutive hours, which occurred at most stations on the 23rd, ranged from 0.24 to 1.32 inch. Although there is but little difference, the greatest amount occurred in the northern portion and the least in the southern. The average amount of precipitation for the State is 1.68 inch below normal, and deficiencies are noted in all portions of the State, the greatest, 2.57 inches, in the southern portion, with local deficiencies ranging from 1.81 to 2.89 inches; in the northern portion the deficiency is 1.96 inch, and the departures from the normal ranged from  $+0.10$  inch (at Angola, the only excess) to  $-1.88$  inch; in the central portion the deficiency is 1.75 inch, with the deficiencies ranging from 0.71 to 1.78 inch. The greatest local measurements in any month of January on record, ranging from 1.90 to 12.50 inches, were recorded at most stations in 1890, and the least amounts, ranging from 0.00 to 1.84 inch, at most stations in

1896. The normals of precipitation for January range from 1.58 to 5.13 inches. The amount of snow was small, average for the State one inch; most fell in the northern portion and least in the southern. The greater part of the month the fields were bare of snow. Hoar-frosts were very frequent. A light thunderstorm passed over Madison on the 30th.

The almost continued mild weather prevented injury to growing cereals and fruit buds, and at the end of the month both were in fair condition. W.

## OBSERVERS' REMARKS.

DELPHI, Carroll Co.—The weather was much too warm for January. Rain from the 22nd to the 25th caused the streams to fill up and broke the ice.

MARION, Grant Co.—Much cloudy and foggy weather prevailed. Wheat looks well at the end of the month but it is in poor condition to stand future cold weather unless snow falls first. The amount of precipitation is short, especially of snow.

CAMBRIDGE CITY, Wayne Co.—January was a month of continuous cloudiness. Snow covered the ground until the 18th. Wheat looks well at the end of the month, which feels like spring. There is no young clover, but the old clover is in good condition.

SEYMOUR, Jackson Co.—Notable meteorological features during January, 1896, were a marked deficiency in sunshine and precipitation and a slight excess in temperature. Wheat and grasses are in good condition at the end of the month and fruit germs are thought to be uninjured. In general, the crop look-out is favorable.

VEVAY, Switzerland Co.—The month has been characteristic chiefly for the amount of cloudiness. The temperature was in excess and the precipitation deficient. At the end of the month fruit buds were swelling and the bulbs of the hyacinth, crocus, narcissus, etc., were one inch above the ground. On the 13th and 14th ice from above was in the Ohio. No ice has been put up yet.

WORTHINGTON, Greene Co.—Wheat generally looks well notwithstanding the lack of precipitation and snow to cover the ground during nearly the entire month.

FARMLAND, Randolph Co.—The month of January has been a cloudy month. The temperature was below zero on two mornings, but the ground has not been frozen over three inches deep. At the end of the month wheat is doing well.

SOUTH BEND, St Joseph Co.—The remarkable features for January were an even temperature, excess of moisture in the air and a relatively light rainfall. At the end of the month the snow had all gone except a few drifts.

BUTLERVILLE, Jennings Co.—The precipitation during the month was below normal and the temperature above. Cloudy weather with but a small amount of precipitation prevailed. Bees were flying on a number of days; robins, wrens, bluebirds, larks and other migratory birds were seen during the month. Live stock is in good condition.

PRINCETON, Gibson Co.—Wheat at the end of January looks quite well; the freezing and thawing has damaged some. The roads



have been in bad condition and much sickness prevailed in the county. Stock is in fine condition and there is plenty of fat pork and beef.

HAMMOND, Lake Co.—The month has been remarkable for the unusually light fall of snow and high range of temperature. It was a wonderfully open month of January for this latitude.

MADISON, Jefferson Co.—The month was noted for its even temperature and deficient precipitation. Thunder was heard on the night of the 30th. The mild weather has caused the buds to swell, which may be fatal to fruit.

ANGOLA, Steuben Co.—The weather during January has been very favorable; the first week cold weather prevailed, after that very nice winter weather. Stock is doing well at the end of the month, and wheat is in excellent condition—it never looked better than now at this time of the season. The snow has nearly all gone. Grapes look as green as 1st November; fruit is in good condition and promises well if not injured by later cold weather.

SUNMAN, Ripley Co.—The weather has been remarkable for cloudy weather with deficient precipitation and excessive temperature.

## STATE SUMMARY.

## JANUARY, 1896.

TEMPERATURE (deg. F.)—Monthly mean 29.8: highest monthly mean 36.1, at Jeffersonville; lowest monthly mean, 23.3, at Hammond; maximum, 60 at Sunman and Evansville on the 31st and 30th; minimum, observed —14 at Tipton on the 4th; Range for State, 74; mean monthly range, 60; greatest local monthly range, 68 at LaFayette; least local monthly range, 50 at Mt. Vernon.

PRECIPITATION (in inches): Average for State, 1.26; greatest amount 2.68 at Hammond; least monthly, 0.55, at Vincennes.

WIND.—(Prevailing direction,) S. W.

THUNDER.—(date): 30th, at Madison

SLEET.—(date): 18, 19, 22, 23.

SNOW.—(dates) 1, 2, 3, 4, 5, 6, 14, 25, 26.

FROST.—(dates) 1, 3, 4, 5, 6, 8, 10, 11, 12, 13, 16, 17, 19, 20, 21, 22, 24, 29, 30.

DENSE FOG.—(dates) 9, 10, 11, 16, 17, 18, 19, 20, 21, 23, 24, 30, 31.

SOLAR HALOS.—1, 3, 5, 22, 30.

LUNAR HALOS.—1, 20, 23, 26, 28, 29, 30.

PLACE OF OBSERVATION.					TEMPERATURE—DEG. FAH.				PRECIPITATION.				NUMBER OF DAYS			NAME OF OBSERVER			
STATION.	COUNTY.	Altitude Above Sea in Feet.	Latitude North.	Longitude West.	Monthly Mean.	Maximum Degrees.	Date.	Minimum Degrees.	Date.	Monthly Range.	Total for month including melted snow.	Am't. Greatest in 24 Consecutive hrs.	Snow fall in inches.	Prevailing direction of winds.	Cloudless.		Partly Cloudy.	Cloudy.	On which Rain or Snow fell.
Southern.																			
Huntingburg.	Dubois .....	b 1 430 38° 21' 86° 59'	N	W	34.0	59	30-31	3	4	56	0.90	0.50	22	4.0	....	9	8	14	2 C. R. Kluger
Mt. Vernon.	Posey .....	b 1 410 37° 58' 87° 54'			33.9	56	19-31	6	4	50	1.06	0.35	24	....	S	8	6	17	5 Manuel Cronbach
Lacoma.	Harrison ..	a .... 38° 03' 86° 08'			34.6	58	30-31	2	4	56	1.65	1.10	2	....	E	10	3	18	4 Lefe Crosier.
Jasper.	Dubois .....	b 1 450 38° 25' 86° 58'			34.8	57	23-30	4	4	53	0.70	0.43	22	....	....	8	5	18	3 Gus Gramelspacher
Princeton.	Gibson .....	a b 481 38° 23' 87° 35'			34.8	58	30	2	4	56	1.19	0.60	23	0.5	SW	10	6	15	4 Elisha Jones.
Marengo	Crawford.....	a 363 38° 24' 86° 24'			34.4	56	30-31	3	4	53	2.30	1.00	22	T	SW	3	12	16	4 J. M. Johnson.
Vevay .....	Switzerland ..	a b 1 525 38° 46' 84° 59'			34.4	53	29-30	0	4	53	1.45	1.05	23-24	....	SW	7	8	16	4 Chas. G. Boerner.
Butlerville.	Jennings. ....	b 1 767 39° 3' 85° 33'			32.2	58	30	-2	4	60	1.00	0.33	23	T	S	11	3	17	6 C. F. Hole.
Worthington.	Greene.....	b c 1 540 39° 9' 87° 0'			31.4	55	30	0	4	55	1.05	0.35	22	0.4	SW	4	11	16	7 Dr. W. B. Squire.
Bedford.....	Lawrence .....	b 1 681 38° 52' 86° 31'			32.8	56	23-31	0	5	56	1.10	0.50	23	....	S	10	3	18	3 John Johnson, Jr.
Seymour ...	Jackson.....	b 1 610 38° 45' 86° 31'			30.6	56	30	0	4	56	0.92	0.35	22	..	SE	4	10	17	8 John A. Forsythe.
Columbus.....	Bartholomew. b 1 632 39° 13' 85° 56'				30.1	56	23	-5	3	61	1.17	0.72	22	0.5	SW	9	4	18	6 J. A. Perry.
Jeffersonville	Clark.....	a b 1 455 38° 16' 85° 45'			36.1	58	23-30	3	4	54	0.90	0.27	22-23	0	W	4	13	14	7 John C. Loomis.
Edwardsville.	Floyd .....	a b 1 901 38° 19' 85° 56'			34.6	60	31	2	4	58	1.21	0.33	2	T	SE	4	11	16	6 Jonathan Beard.
Sunnan .....	Ripley .....	3 1018 39° 14' 85° 6'			29.1	52	30	-6	4	58	1.30	0.50	24	0.5	NW	4	11	16	6 B. F. Ferris.
Evansville ...	Vanderburg. b 1 383 38° 00' 87° 38'				33.8	60	30	5	3-4	55	0.57	0.30	23	T	SW	9	4	18	5 Lewis J. Ahlering.
Vincennes...	Knox.....	b 1 431 38° 47' 87° 33'			31.7	57	31	2	4	55	0.55	0.47	24	....	....	..	..	..	2 J. T. McJimsey.
Madison .....	Jefferson. ....	b 1 460 38° 44' 85° 27'			34.6	57	29	1	4	56	1.44	0.41	31	0.5	NE	7	5	19	6 W. P. Goswell.
Scottsburg ...	Scott.....	a 570 38° 42' 85° 41'			33.3	55	23	1	4	54	0.81	0.24	23	T	....	7	6	18	4 F. N. Park.
Mean.....					33.2	57	....	1	..	56	1.12	0.52	..	0.5	SW	7	7	17	5
CENTRAL.																			
*Franklin. ...	Johnson .....	a 740 39° 30' 86° 13'			30.6	55	20	-4	4	59	1.70	0.65	22	0.5	....	5	7	19	5 D. A. Owen.
Connorsville.	Fayette.....	b 1 844 39° 40' 85° 3'			29.7	53	30	-6	4	59	1.37	0.62	24	1.0	SW	3	15	13	9 H. Hessler.
Indianapolis	Marion.....	b c 1 766 39° 47' 86° 11'			30.0	55	30	-5	4	60	1.60	0.63	23-24	1.0	SE	5	9	17	15 C. F. R. Wappenhans
Mauzy .....	Rush .....	b 1 980 39° 38' 85° 24'			28.6	52	30	-8	4	60	1.49	0.62	24	1.0	....	..	..	..	10 E. Kirkwood.
Bloomington.	Monroe.....	1 744 39° 12' 86° 32'			....	....	....	....	....	....	....	....	....	....	....	..	..	..	J. F. Blewett.



CambridgeCity Wayne	b 1	39° 53' 85" 14	28.5	30	30	-8	4	58	1.84	0.94	24	0.7	SW	7	8	16	10	Rev. E. J. Spelman.
Rockville	b 1	722 39 46 87 19	29.2	55	30	-5	4	60	0.85	0.38	23	0.5	.....	.....	.....	.....	5	Dr. W. N. ...
Farmland	b 1	1101 40 11 85 10	29.5	54	30	-6	3	60	1.26	0.52	23	1.5	.....	5	5	21	5	W. J. Davisson.
Anderson	b 1	892 40 10 85 46	28.6	53	23-30	-10	4	66	1.47	0.70	24	2.0	W	7	14	10	8	W H. Stanton.
Terre Haute.	b 1	498 39 29 87 28	32.6	58	29	0	4	58	0.75	0.51	23-24	T	S	9	0	22	3	R. G. Gillum.
Lyford	b 1	39 39 87 29	30.3	53	30	-2	4	55	0.79	0.47	23	0.2	SE	3	13	15	5	Dr. Geo. E. Walton.
Greencastle	b 1	860 39 39 85 51	28.8	53	30	-4	4-5	57	0.86	0.45	22	0.4	SE	5	12	14	10	Guy Wilson.
Tipton	b 1	860 40 19 85 56	28.6	..	31	-14	4	..	0.93	0.38	23	1.4	SW	9	10	12	6	R. M. Grindle.
Mean	..	..	29.6	54	....	-6	..	60	1.24	0.57	....	0.8	SE	6	9	16	8	..
Northern. LaFayette	b c 1	661 40 27 86 55	28.0	56	30	-12	4	68	0.83	0.47	23	0.8	SW	7	12	12	8	H. A. Huston.
Delphi	c b 1	658 40 36 86 41	26.7	51	30	-11	4	62	0.79	0.36	23	1.0	.....	4	10	17	8	Higginbotham & Son
Marion	b 1	814 40 29 85 41	28.8	52	30	-12	4	64	1.59	0.79	24	1.2	SW	5	10	16	9	James F. Hood.
Kokomo	a b	840 40 33 86 8	28.2	53	30	-8	4	61	0.99	0.27	24	1.6	S	1	16	14	8	Dr. T. C. Hunter
ColumbiaCity	a	841 41 9 85 30	25.7	48	30	-12	4	60	1.60	0.75	24	1.9	.....	6	15	10	7	Dr. N. I. Kithcart.
Angola	a b	1052 41 37 85 1	28.0	50	30	-10	4	60	2.37	0.85	24	3.8	E	7	5	19	7	L. Stealy.
Logansport	b 1	626 40 50 86 21	29.0	56	31	-7	4	63	0.90	0.25	18	....	.....	3	10	18	7	D. E. Pryor.
Topeka	b 1	41 38 85 33	...	..	..	..	..	..	....	....	..	..	.....	..	..	..	..	J. C. Young.
Valparaiso	b 1	737 41 32 87 2	24.7	50	29-30	-12	4	62	1.15	0.40	22	2.5	SW	4	11	16	6	J. N. Roe.
Hammoud	b 1	41 44 87 25	23.3	51	30	-9	4	60	2.68	1.22	23	0.4	.....	13	10	8	7	C. W. Whitney
Russell	b 1	668 41 8 87 10	...	..	..	..	..	..	....	....	..	..	.....	..	..	..	..	David W. Shields
Huntington	b 1	741 40 53 85 29	28.4	53	30	-10	4	63	1.73	0.53	23	2.0	SW	6	11	14	9	Wm. McGrew.
South Bend	b 1	736 41 36 86 16	26.4	52	30	-10	4	62	1.04	0.45	24	1.5	SW	6	11	14	8	H. H. Swain.
Syracuse	....	41 24 85 44	27.0	56	30	-10	4	66	1.35	0.36	24	1.9	S	9	8	14	8	J. T. Dolan.
Bluffton	c 1	835 40 45 85 13	26.4	55	30	-12	4	67	1.31	0.63	24	1.0	S	10	8	13	8	S. E. Hitchcock.
Mean	..	..	28.7	53	....	-10	....	63	1.41	0.55	..	1.6	SW	6	11	14	8	..
Northern Counties	..	..	26.7	53	....	-10	....	63	1.41	0.55	....	1.6	SW	6	11	14	8	..
Central Counties	..	..	29.6	54	....	-6	....	60	1.24	0.57	....	0.8	SE	6	9	16	8	..
Southern Counties	..	..	33.2	57	....	1	....	56	1.12	0.52	....	0.5	SW	7	7	17	5	..
State	..	..	29.8	55	....	-5	....	60	1.26	0.55	....	1.0	SW	6	9	16	7	..

The time noted herein is that of the 90th meridian. Wherever Self-Registering thermometers (b) are used, the extremes of temperature are noted from these, elsewhere from observed readings. The different hours from which the monthly means are obtained, are indicated by 1. from maximum and minimum observations; 2. from the 7 a. m. and 7 p. m. observations; when no figure, from the 7 a. m., 2 p. m., and 9 p. m. observations; and 3 from observations of other hours. a. Observations are taken at 7 p. m., 2 p. m. and 9 p. m. b. Maximum and minimum. c. At 7 a. m. and 7 p. m. d. Indicates that observations on Sunday are not made.

# COMPARATIVE TEMPERATURE AND PRECIPITATION FOR JAN., 1896.

COUNTIES.	STATIONS.	TEMPERATURE—DEGREES—FAHRENHEIT.						PRECIPITATION—INCHES.					
		Number of Years	Normal.	Highest Record.	Year.	Lowest Record.	Year.	Highest.	Normal.	Highest.	Year.	Lowest.	Year.
SOUTHERN.	.....	13	30.3	43.5	1890	22.5	1893	71	1890	11	1890	11	1890
	Dubois	14	30.4	44.2	1890	22.5	1884	70	1890	12	1890	12	1885
Gibson.	Princeton.	14	29.9	44.2	1890	22.7	1893	69	1890	12	1890	12	1886
	Crawford	15	32.5	45.7	1890	23.5	1887	69	1890	12	1890	12	1886
Switzerland	Marengo	32	31.0	49.9	1875	19.6	1893	79	1890	12	1890	12	1884
	Vevay	12	29.1	41.1	1890	19.5	1893	68	1890	12	1890	12	1896
Jeunings.	Butlerville.	15	27.0	39.1	1890	18.5	1893	71	1890	11	1890	11	1890
	Worthington	9	29.6	42.8	1890	23.8	1895	69	1890	12	1890	12	1895
Greene.	Seymour	13	25.9	40.1	1890	19.4	1893	68	1890	11	1890	11	1890
	Bartholomew	3	34.2	39.1	1894	29.0	1895	63	1894	17	1895	12	1895
Jefferson	Madison	9	32.6	42.3	1890	24.4	1892	71	1890	19	1890	19	1890
	Posey	7	33.0	42.3	1890	24.3	1893	70	1890	12	1890	12	1890
Clark	Jeffersonville	7	33.0	42.3	1890	24.3	1893	70	1890	12	1890	12	1890
	.....	7	33.0	42.3	1890	24.3	1893	70	1890	12	1890	12	1890

CENTRAL.		13	24.5	37.7	1800	16.3	1803	70	1800	11	-25	1885	22	+3.1	13	2.00	7.70	1800	1.24	1806	-1.25
Johnson	Franklin	14	24.0	38.5	1800	13.7	1804	70	1800	11	-23	1884	5	+4.6	14	2.06	8.09	1850	1.20	1884	-1.26
Fayette	Comersville	15	27.0	40.0 <th>1800</th> <th>19.0</th> <th>1803</th> <th>68</th> <th>1800</th> <th>11</th> <th>-24</th> <th>1884</th> <th>5</th> <th>+2.7</th> <th>15</th> <th>3.03</th> <th>5.99</th> <th>1800</th> <th>1.13</th> <th>1802</th> <th>-1.66</th>	1800	19.0	1803	68	1800	11	-24	1884	5	+2.7	15	3.03	5.99	1800	1.13	1802	-1.66
Marion	Indianapolis	25	27.5	45.9 <th>1880</th> <th>17.3</th> <th>1803</th> <th>70</th> <th>1800</th> <th>11</th> <th>-23</th> <th>1884</th> <th>5</th> <th>+2.4</th> <th>25</th> <th>2.88</th> <th>10.20</th> <th>1800</th> <th>1.11</th> <th>1875</th> <th>-1.28</th>	1880	17.3	1803	70	1800	11	-23	1884	5	+2.4	25	2.88	10.20	1800	1.11	1875	-1.28
Wayne	Cambridge City	4	25.0	32.6 <th>1804</th> <th>16.7</th> <th>1803</th> <th>58</th> <th>1804</th> <th>17</th> <th>-19</th> <th>1803</th> <th>15</th> <th>+3.5</th> <th>4</th> <th>2.35</th> <th>3.56</th> <th>1803</th> <th>1.37</th> <th>1804</th> <th>-0.71</th>	1804	16.7	1803	58	1804	17	-19	1803	15	+3.5	4	2.35	3.56	1803	1.37	1804	-0.71
Vigo	Terre Haute	3	30.6	35.7 <th>1800</th> <th>23.5</th> <th>1805</th> <th>65</th> <th>1804</th> <th>17</th> <th>-9</th> <th>1805</th> <th>12</th> <th>+2.0</th> <th>3</th> <th>1.67</th> <th>2.26</th> <th>1805</th> <th>0.75</th> <th>1806</th> <th>-0.92</th>	1800	23.5	1805	65	1804	17	-9	1805	12	+2.0	3	1.67	2.26	1805	0.75	1806	-0.92
Rush	Mauzy	16	24.1	36.0 <th>1800</th> <th>16.0</th> <th>1803</th> <th>65</th> <th>1800</th> <th>11</th> <th>-24</th> <th>1886</th> <th>12</th> <th>+4.5</th> <th>16</th> <th>3.27</th> <th>8.05</th> <th>1800</th> <th>1.14</th> <th>1802</th> <th>-1.78</th>	1800	16.0	1803	65	1800	11	-24	1886	12	+4.5	16	3.27	8.05	1800	1.14	1802	-1.78
Parke	Rockville	10	27.0	37.7 <th>1800</th> <th>15.0</th> <th>1803</th> <th>69</th> <th>1800</th> <th>12</th> <th>-19</th> <th>1803</th> <th>15</th> <th>+2.2</th> <th>10</th> <th>2.40</th> <th>7.70</th> <th>1800</th> <th>0.85</th> <th>1806</th> <th>-1.61</th>	1800	15.0	1803	69	1800	12	-19	1803	15	+2.2	10	2.40	7.70	1800	0.85	1806	-1.61
Randolph	Farmland	15	25.5	39.2 <th>1800</th> <th>15.3</th> <th>1803</th> <th>68</th> <th>1800</th> <th>11</th> <th>-24</th> <th>1885</th> <th>22</th> <th>+4.0</th> <th>15</th> <th>2.36</th> <th>6.59</th> <th>1800</th> <th>0.90</th> <th>1884</th> <th>-1.30</th>	1800	15.3	1803	68	1800	11	-24	1885	22	+4.0	15	2.36	6.59	1800	0.90	1884	-1.30
NORTHEN.		13	23.4	34.6 <th>1800</th> <th>16.1</th> <th>1803</th> <th>70</th> <th>1800</th> <th>13</th> <th>-33</th> <th>1865</th> <th>22</th> <th>+3.3</th> <th>13</th> <th>2.37</th> <th>5.72</th> <th>1800</th> <th>1.41</th> <th>1806</th> <th>-1.96</th>	1800	16.1	1803	70	1800	13	-33	1865	22	+3.3	13	2.37	5.72	1800	1.41	1806	-1.96
Tipteenoe	LaFayette	17	24.1	41.4 <th>1800</th> <th>12.5</th> <th>1803</th> <th>70</th> <th>1800</th> <th>13</th> <th>-33</th> <th>1865</th> <th>22</th> <th>+3.9</th> <th>17</th> <th>2.18</th> <th>6.11</th> <th>1800</th> <th>0.40</th> <th>1881</th> <th>-1.35</th>	1800	12.5	1803	70	1800	13	-33	1865	22	+3.9	17	2.18	6.11	1800	0.40	1881	-1.35
Whitley	Columbia City	12	23.4	34.0 <th>1800</th> <th>13.9</th> <th>1803</th> <th>63</th> <th>1800</th> <th>11</th> <th>-22</th> <th>1867</th> <th>7</th> <th>+2.3</th> <th>12</th> <th>2.29</th> <th>6.19</th> <th>1800</th> <th>1.25</th> <th>1801</th> <th>-0.69</th>	1800	13.9	1803	63	1800	11	-22	1867	7	+2.3	12	2.29	6.19	1800	1.25	1801	-0.69
Steuben	Angola	12	23.5	34.9 <th>1800</th> <th>13.6</th> <th>1805</th> <th>64</th> <th>1800</th> <th>11</th> <th>-18</th> <th>1865</th> <th>22</th> <th>+2.5</th> <th>12</th> <th>2.27</th> <th>3.91</th> <th>1800</th> <th>1.44</th> <th>1889</th> <th>-0.10</th>	1800	13.6	1805	64	1800	11	-18	1865	22	+2.5	12	2.27	3.91	1800	1.44	1889	-0.10
Grant	Marion	11	25.0	36.1 <th>1800</th> <th>16.2</th> <th>1803</th> <th>60</th> <th>1804</th> <th>17</th> <th>-25</th> <th>1867</th> <th>7</th> <th>+3.8</th> <th>11</th> <th>1.80</th> <th>4.10</th> <th>1800</th> <th>0.50</th> <th>1887</th> <th>-0.30</th>	1800	16.2	1803	60	1804	17	-25	1867	7	+3.8	11	1.80	4.10	1800	0.50	1887	-0.30
Cass	Logansport	12	23.7	33.5 <th>1800</th> <th>14.4</th> <th>1804</th> <th>72</th> <th>1876</th> <th>13</th> <th>-30</th> <th>1873</th> <th>7</th> <th>+5.3</th> <th>12</th> <th>2.11</th> <th>4.96</th> <th>1870</th> <th>0.00</th> <th>1806</th> <th>-1.21</th>	1800	14.4	1804	72	1876	13	-30	1873	7	+5.3	12	2.11	4.96	1870	0.00	1806	-1.21
Carroll	Delphi	12	24.3	33.6 <th>1800</th> <th>16.4</th> <th>1803</th> <th>63</th> <th>1800</th> <th>12</th> <th>-18</th> <th>1805</th> <th>12</th> <th>+2.4</th> <th>12</th> <th>2.26</th> <th>5.59</th> <th>1800</th> <th>0.79</th> <th>1806</th> <th>-1.88</th>	1800	16.4	1803	63	1800	12	-18	1805	12	+2.4	12	2.26	5.59	1800	0.79	1806	-1.88
Huntington	Huntington	3	26.5	33.4 <th>1804</th> <th>19.8</th> <th>1805</th> <th>56</th> <th>1804</th> <th>20</th> <th>-11</th> <th>1805</th> <th>11</th> <th>-0.1</th> <th>3</th> <th>2.26</th> <th>2.63</th> <th>1805</th> <th>1.73</th> <th>1806</th> <th>-0.52</th>	1804	19.8	1805	56	1804	20	-11	1805	11	-0.1	3	2.26	2.63	1805	1.73	1806	-0.52
Porter	Valparaiso	4	22.5	26.6 <th>1804</th> <th>15.7</th> <th>1805</th> <th>58</th> <th>1804</th> <th>18</th> <th>-18</th> <th>1805</th> <th>8</th> <th>+2.2</th> <th>3</th> <th>1.58</th> <th>1.90</th> <th>1805</th> <th>1.15</th> <th>1806</th> <th>-0.45</th>	1804	15.7	1805	58	1804	18	-18	1805	8	+2.2	3	1.58	1.90	1805	1.15	1806	-0.45
Howard	Kokomo	4	24.5	32.3 <th>1804</th> <th>16.6</th> <th>1803</th> <th>60</th> <th>1804</th> <th>17</th> <th>-17</th> <th>1803</th> <th>15</th> <th>+3.7</th> <th>4</th> <th>1.91</th> <th>2.83</th> <th>1803</th> <th>0.99</th> <th>1806</th> <th>-0.92</th>	1804	16.6	1803	60	1804	17	-17	1803	15	+3.7	4	1.91	2.83	1803	0.99	1806	-0.92
STATE.		15	26.2	38.6 <th>1800</th> <th>18.3</th> <th>1803</th> <th>71</th> <th>1800</th> <th>11</th> <th>-33</th> <th>1865</th> <th>22</th> <th>+3.6</th> <th>15</th> <th>2.94</th> <th>7.04</th> <th>1800</th> <th>1.26</th> <th>1806</th> <th>-1.68</th>	1800	18.3	1803	71	1800	11	-33	1865	22	+3.6	15	2.94	7.04	1800	1.26	1806	-1.68





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May 25, 196.

INDIANA  
CLIMATE AND CROP SERVICE

THE AGRICULTURAL EXPERIMENT STATION

AT

PURDUE UNIVERSITY

CO-OPERATING WITH

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

APRIL, 1896.

H. A. HUSTON, DIRECTOR.

Purdue University, LaFayette, Ind.

C. F. R. Wappenhans, Local Forecast Official Weather Bureau. Assistant Director

Reports and all communications from Observers relating to the Indiana Climate and Crop Service should be addressed, under the frank to C. F. R. Wappenhans, Local Forecast, Official Weather Bureau, Indianapolis, Ind.





## APRIL, 1896.

The weather during April, 1896, was exceedingly warm and dry; a deficiency in the daily temperature occurred only on about seven days at the beginning of the month and all the following days were warm and the daily excess large. The monthly means of temperature ranged from 54.4 in the extreme northern portion to 64.7 degrees in the extreme southwestern portion of the State. The maximum temperatures ranging from 84 to 91 degrees were recorded at most stations on the 16th., and the minimum temperatures ranging from 13 degrees in the extreme northern portion to 30 degrees in the extreme southern portion were recorded in the southern and central portions at most stations on the 3d and 4th., and in the northern portion at most stations on the 2d. The average temperature for the State, 58.8 degrees, was 5.9 degrees above the normal, with the local normal temperatures ranging from 48.6 to 58.4 degrees, and an excess occurred everywhere; the greatest average excess, 6.5 degrees, is noted in the southern portion with the excess at the different stations ranging from 4.8 to 8.8 degrees; in the northern portion the average excess is 6.0 degrees and the local excesses ranged from 2.9 to 8.6 degrees and in the central portion the excess of 4.9 degrees was the smallest with local excesses ranging from 4.6 to 7.6 degrees. The warmest month of April on record everywhere was that of this year, with the local monthly means ranging from 54.4 to 64.7 degrees and the lowest monthly means, ranging from 43.4 to 55.6 degrees, were recorded in different years. The highest temperatures ranging from 85 to 91 degrees, were recorded at most stations in 1896, and the lowest temperatures in April, ranging from 8 to 29 degrees, were recorded in different years.

The total monthly measurements of precipitation during April ranged from "Trace" to 5.91 inches, and the greatest amounts of precipitation in any 24 consecutive hours, ranging from T. to 2.72, were recorded on different days. Days on which precipitation was recorded were only few, in average about 6 days. The average deficiency for the State is 1.69 inch, and a deficiency is noted everywhere, except at few stations in the northern portion, where heavier and more frequent rains fell; the deficiency in the southern portion, 3.20 inches, is the greatest, and the local deficiencies ranged from 1.00 to 6.08 inches; the deficiency in the central portion is 2.08 inches and the local deficiency ranged from 1.10 to 2.86 inches; in the northern portion occurred an excess of 0.27 inch, with the local departures from the normal ranging from -0.31 to +2.78 inches. The local normals of precipitation range from 2.29 to 6.38 inches. The greatest monthly amounts of precipitation for the month of April on

record, ranging from 4.16 to 16.60 inches, were recorded in the year 1893 and the least amounts, ranging from T. ro 1.95 inch, were recorded in the southern and central portions in the year 1896 and in the northern portion at most stations in the year 1895.

Light flurries of snow occurred in localities of the central and northern portion in the earliest part of the month. Hail fell at few stations during the passage of thunderstorms; some quite large, but not in quantity enough to do damage. Thunderstorms were quite frequent for April, but they were all moderate. Hoar-frosts formed on few nights, but did no injury. Southwest winds prevailed.

The weather during April was very favorable for farm work and plowing for corn advanced and all crops were in promising condition and in advance of the season, but in the southern portion rain is much needed, as the crops begin to suffer and to show the evil effects of the drouth.

## OBSERVERS' REMARKS.

DELPHI, Carroll Co.—Cool weather prevailed until the 10th., since when all vegetation has advanced rapidly; grass, wheat, oats and rye look well; some clover is not so good. Fruit is well advanced, very full of bloom and the prospect is good for a full crop; all garden stuff is doing well, and a few good showers will do much to assure abundant crops.

NORTHFIELD, Boone Co.—A thunderstorm passed on the night of the 20th., many objects in the county were struck by lightning. Fine weather prevailed most of the month and crops have grown rapidly. The prospect for fruit is very good.

VEVAY, Switzerland Co.—The entire month has been devoid of rain, which is a serious injury to crops just planted. The temperature was much above normal. Only one frost occurred, which is unusual for this month. Deficiency of rainfall will prove a detriment to farmers. The ground is very hard.

WORTHINGTON, Green Co.—The month has been hot and dry, favorable to farm work, but too dry for the rapid advancement of vegetation. The prospect for wheat is only fair, for oats bad, clover and grass are not in good condition at the end of the month. All fruit, except apples, promise well; apples will yield only a moderate crop.

COLUMBIA CITY, Whitley Co.—The weather was unusually warm after the first week. Vegetation put forth much earlier than usual. The close of the month finds the forests green and blossoms falling from fruit trees.

MARION, Grant Co.—After the first days the weather during the month has been ideal; high temperature and rain have caused everything to grow rapidly. Pasturage is in fine condition; wheat has been improved; fruit promises well; corn planting commenced early.

SEYMOUR, Jackson Co.—April weather was phenomenal; abnormally high temperature, great deficiency in precipitation and an unusual amount of sunshine. The effect of the drouth on all crops is severe and on wheat almost disastrous. Spring planting had fairly advanced at the end of the month, but the growing crops had made but little headway.

SOUTH BEND, St. Joseph Co.—The season is about two weeks in advance. Pears, peaches, plums and cherries have set well; apple bloom is falling; rye is heading where not pastured; wheat and grass are rank and forward; at the end of the month the forests are green, sugar maples and other trees are in full leaf. Birds are no more abundant than last year; heard the first brown thrush on the 17th.; found the first wild flowers and heard the first toads on the 12th. A gale blew on the 13th. Hail as large as walnuts fell on the 20th., but not in sufficient quantity to do damage.

FARMLAND, Randolph Co.—The month of April has been the warmest for years, with just enough rain to make vegetation grow well; everything seems to be two weeks earlier than last year; fruit trees bloomed early and some planting had been done at the end of the month. Wheat and grass look well.



LOGANSPOUT, Cass Co.—High wind blew on the 18th. Ice formed on the morning of the 22d.

ANGOLA, Steuben Co.—The beginning of the month was rough and cold, but after Easter it remained warm and vegetation grew very rapidly. Heavy rains near the end of the month stopped plowing. The season has not been so early for many years; at the end of the month fruit trees are all in bloom and wheat nearly knee high, but no corn had been planted.

JEFFERSONVILLE, Clark Co.—The month of April has been the driest and warmest on record.

HAMMOND, Lake Co.—During the entire month fine open spring weather prevailed. Fruit buds were well advanced; at the end of the month early varieties were in bloom; gardens and pastures look splendid.

CONNERSVILLE, Fayette Co.—April has been the warmest month of April during the past 14 years and the least amount of rain fell except in April, 1889.

MADISON, Jefferson Co.—This month was the driest month of April on record; all crops are retarded for the want of rain.

INDIANAPOLIS, Marion Co.—After the cold weather at the beginning of the month the weather was very favorable to crops and farm work. At the end of the month all crops are in good condition and plowing and planting were well advanced.

VALPARAISO, Porter Co.—A trace of snow fell on the 1st., and strong northwest winds prevailed on the 1st., 2d. and 3d., on the 20th hail and rain fell with a southwest storm.

CAMBRIDGE CITY, Wayne Co.—The weather was favorable for farm work; wheat and grass look well, but more rain is needed. The prospect for cherries, plums and pears is great, but apples will be scarce.

BUTLERVILLE, Jennings Co.—The rainfall was below, and temperature above normal. Observed a meteor of unusual brilliancy at 7:18 p. m. on the 21st. (The same was also observed at New Castle, it was of a beautiful greenish blue color.)

SCOTTSBURG, Scott Co.—Thunderstorms and high wind on the 8th. and 20th.

PRINCETON, Gibson Co.—The month was dry and dusty until the 26th. A heavy thunderstorm passed on the 29th. Vegetation grew very vigorous; some corn had been planted at the end of the month. Pasturage is in good condition and the fruit prospect is good. Cutworms had done injury.

BLUFFTON, Wells Co.—Lightning on the 23d. and 27th. did much damage to dwellings.

KNIGHTSTOWN, Henry Co.—The weather during the month was fine for farmers. Noted no special phenomena.

SYRACUSE, Kosciusko Co.—On the 20th. hail fell one-half inch in diameter; three miles north some hail was as large as walnuts. The end of the month finds vegetation unusually well advanced; fruit of all kind were in bloom and promise an abundant harvest. Wheat in most fields is above normal. The high temperature and absence of frost during the last 25 days have resulted in remarkable early development of both vegetable and animal forms; dragon flies, butterflies and moths appeared on the 10th.

## STATE SUMMARY.

APRIL, 1896.

TEMPERATURE (deg. F.)—Monthly mean 58.8: highest monthly mean 64.7 at Mt. Vernon; lowest monthly mean 54.4 at Delphi; maximum, 91 at Vevay on the 17th minimum, observed 13 at South Bend on the 2d; Range for State, 78; mean monthly range, 63; greatest local monthly range, 73 at South Bend; least local monthly range, 59 at Edwardsville, Franklin and Greencastle.

PRECIPITATION (in inches): Average for State, 1.81; greatest amount 5.91 at Angola; least monthly "Trace" at Bloomington.

WIND.—(Prevailing direction.) S.W.

THUNDERSTORMS (date): 11, 20, 21, 22, 23, 24, 26, 27, 29.

HAIL.—(date): 8, 20, 21, 27.

SLEET.—(date): 8.

SNOW.—(dates): 1, 2, 5, 8.

FROST.—(dates) 2, 3, 4, 5, 6, 7, 8, 10, 22.

DENSE FOG.—(date) 21, 28.

SOLAR HALOS.—11, 18, 25, 28.

LUNAR HALOS.—18.

AURORA—17 at Syracuse.

POLAR BANDS.—16, 25, 27 at Kokomo.

LARGE METEOR—21 at Butlerville and New Castle.

PLACE OF OBSERVATION.					TEMPERATURE—DEG. FAH.				PRECIPITATION.				NUMBER OF DAYS			NAME OF OBSERVER				
STATION.	COUNTY.	Altitude Above Sea in Feet.	Latitude North.	Longitude West.	Monthly Mean.	MAXIMUM		MINIMUM		Monthly Range.	Total for month including melted snow.	Greatest in 24 consecutive hrs.		Snow fall Inches	Prevailing direction of winds		Cloudless	Partly Cloudy	Cloudy	On which Rain or Snow fell.
						Degrees.	Date.	Degrees.	Date.			Am't.	Date.							
Southern. Huntingburg.	Dubois	b 1	430 38° 21'	86° 59' W	...	..	...	..	..	..	...	...	..	...	...	..	..	..	C. R. Kluger	
Mt. Vernon.	Posey	b 1	410 37° 58'	87° 54'	64.7	90	18	30	3-4	60	2.59	1.73	29	...	SW	9	19	2	3	Manuel Cronbach
Laconia.	Harrison	a	...	38° 03'	86° 08'	...	...	...	...	...	...	...	..	...	...	..	..	..	..	Lafe Crozier.
Jasper.	Dubois	b 1	450 38° 25'	86° 58'	63.2	88	16	27	4	61	0.53	0.40	13	...	...	9	13	8	3	Gus Gramelspacher
Princeton.	Gibson	a b	481 38° 23'	87° 35'	60.6	88	13-28	27	4	61	2.35	1.50	29	...	SW	18	11	1	3	Elisha Jones.
Marengo	Crawford	a	363 38° 24'	86° 24'	62.8	90	16-18	25	4	65	0.30	0.30	13	...	SW	12	17	1	1	J. M. Johnson.
Vevay	Switzerland	a b 1	525 38° 46'	84° 59'	63.4	91	17	30	2	61	0.22	0.10	9	...	SW	9	17	4	4	Chas. G. Boerner.
Butlerville.	Jennings	b 1	767 39° 3'	85° 33'	61.5	90	18	23	4	67	0.43	0.15	9-14	...	S	12	16	2	4	C. F. Hole.
Worthington.	Greene	b c 1	540 39° 9'	87° 0'	61.4	89	16	25	4	64	0.61	0.22	29	...	SW	7	20	3	5	Dr. W. B. Squire.
Bedford.	Lawrence	b 1	681 35° 52'	86° 31'	...	...	..	..	..	..	...	...	..	...	...	..	..	..	..	John Johnson, Jr.
Seymour	Jackson	b 1	610 38° 45'	86° 31'	60.4	87	15-17	25	3	62	0.25	0.13	9	...	NW	11	17	2	2	John A. Forsythe.
Columbus.	Bartholomew	b 1	632 39° 13'	85° 56'	59.4	87	16-20	24	4	63	0.21	0.11	23	...	SW	18	9	3	3	J. A. Perry.
Jeffersonville	Clark	a b 1	455 38° 16'	85° 45'	63.7	90	17	30	3-4	60	0.24	0.09	9	...	S	12	10	8	4	John C. Loomis.
Edwardsville.	Floyd	a b 1	901 38° 19'	85° 56'	64.4	88	18	26	3	59	0.45	0.27	24	...	S	10	19	1	5	Jonathan Beard.
Sunman	Ripley	3	1018 39° 14'	85° 6'	58.8	84	17-28	24	3-4	60	0.55	0.20	9	...	SW	9	17	4	5	B. F. Ferris.
Evansville	Vanderburg	b 1	383 38° 00'	87° 38'	64.2	90	29	29	4	61	1.65	0.45	29	...	S	18	6	6	9	Lewis J. Ahlering.
Vincennes	Knox	b 1	431 38° 47'	87° 33'	63.9	93	29	27	3-4	66	0.59	0.30	29	...	...	16	0	14	4	J. T. McJimsey.
Madison	Jefferson	b 1	460 38° 44'	85° 27'	63.2	89	16-18	27	4	62	0.28	0.15	19	...	SW	9	7	14	3	W. P. Goswell.
Scottsburg	Scott	a	570 38° 42'	85° 41'	62.5	88	17-8	27	4	61	0.10	0.10	9	...	S	14	14	2	1	F. N. Park.
Mean.	...	...	...	...	62.4	89	...	27	..	62	0.71	0.40	..	14.8	SW	12	13	5	4	...
CENTRAL. *Franklin.	Johnson	a	740 39° 30'	86° 13'	59.5	88	17	29	3	59	0.97	0.62	23	T	...	12	13	5	4	D. A. Owen.
Connorsville.	Fayette	b 1	844 39° 40'	85° 3'	58.4	86	16-28	25	2-7	61	1.27	0.50	23	...	SW	10	16	4	4	H. Hessler.
Indianapolis	Marion	b c 1	766 39° 47'	86° 11'	60.0	87	16	26	3	61	1.27	0.44	8-9	T	SE	9	12	9	10	C. F. K. Wappenhans
Mauzy	Rush	b 1	980 39° 38'	85° 24'	58.2	87	16	23	4	64	1.02	0.40	21	T	...	6	14	10	4	E. Kirkwood.
Bloomington.	Monroe	b 1	744 39° 12'	86° 32'	61.5	86	16-17	26	4	60	T	T	6.14	...	S	21	4	5	0	J. F. Blewett



City	Wayne.	b 1	39° 53' 85" 14"	57.5	85	18	24	7	61	1.18	0.70	21	SW	4	8	3	Rev. E. J. Spelman
Northfield	Boone	b 1	.....	56.9	85	18	22	4	63	1.73	0.70	20	SW	9	15	6	H. W. Nichols.
Rockville	Parke.	b 1	722 39 46 87 19	59.5	88	16	23	4	65	1.58	0.46	20-21	T	8	11	8	Dr. W. N. Art.
Farmland	Randolph	b 1	1101 40 11 85 10	58.6	85	16-18	25	2-6	60	2.20	1.15	20	T	3	0	22	W. J. Davisson.
Anderson	Madison	b 1	892 40 10 85 46	58.3	85	16	25	3-7	60	2.33	1.06	21	S	14	13	3	W. H. Stanton.
Terre Haute	Vigo	b 1	498 39 29 87 28	61.8	88	16	28	3	60	1.41	0.51	29	S	17	3	10	R. G. Gillum
Knightstown	Henry	b 1	..... 39 48 85 28	59.9	88	16-17	23	4	65	1.66	0.77	20	SW	13	12	5	J. C. Deem
Greencastle	Putnam	b 1	860 39 39 85 51	58.5	84	16-17	25	3	59	1.06	0.39	8	T	SE	18	9	Guy Wilson.
Tipton	Tipton	b 1	860 40 19 85 56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tipton Lumber Co.
Mean	.....	.....	.....	57.4	86	.....	25	.....	61	1.36	0.59	.....	T	SW	12	10	8
NORTHERN.	Tippecanoe	b 1	661 40 27 86 55	57.9	86	16-17	20	4	66	2.65	1.05	20	T	S	17	6	H. A. Huston.
La Fayette	Carroll	b 1	668 40 36 86 41	54.4	84	17	22	3-4	62	2.62	1.06	23	T	.....	8	11	Higginbotham & Son
Delphi	Grant	b 1	814 40 29 85 41	57.4	87	16	20	3	67	3.11	1.13	21	T	SW	10	12	James F. Hood.
Marion	Howard	a b	840 40 33 86 8	58.1	89	16	21	2	68	4.12	1.30	20	0 1	SW	10	12	Dr. T. C. Hunter
Kokomo	Whitley	a	841 41 9 85 30	55.4	84	16-17	22	2	62	2.41	1.12	20	.....	.....	19	6	Dr. N. F. Kithcart.
Columbia City	Steuben	a b	1052 41 37 85 1	54.9	90	28	23	2-3	67	5.91	2.72	20	2.0	SE	8	9	L. Stealy.
Angola	Cass	b 1	620 40 50 86 21	59.7	87	16	25	3-4	62	2.80	1.41	21	.....	.....	7	17	D. E. Pryor.
Logansport	La Grange	b 1	..... 41 38 85 33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. C. Young.
Topeka	Porter	b 1	737 41 32 87 2	54.6	87	16-17	19	2	68	3.34	1.78	20	T	SW	13	8	W. J. Lightcap.
Valparaiso	Lake	b 1	..... 41 44 87 25	55.1	88	16	27	6	61	3.92	1.14	21	.....	.....	12	15	C. W. Whitney.
Hammond	Jasper	b 1	668 41 8 87 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	David W. Shields.
Rensselaer	Huntington	b 1	741 40 53 85 29	56.8	87	16	24	2	63	2.82	1.23	20	0.5	SW	14	9	Wm. McGrew.
Huntington	St. Joseph	b 1	726 41 36 86 16	55.6	86	16	13	2	73	2.35	1.26	20	1.0	SW	0	14	H. H. Swalm.
South Bend	Kosciusko	3	864 41 24 85 44	57.3	84	17	24	2	60	2.51	1.73	20	0 1	S	13	2	J. T. Dolan.
Syracuse	Wells	c 1	835 40 45 85 13	56.9	88	28	19	4	68	5.29	2.31	20-21	.....	SW	14	7	S. E. Hitchcock.
Bluffton	Mean	.....	.....	56.5	87	.....	22	.....	65	3.37	1.48	.....	0.4	SW	12	10	8
Northern Counties	.....	.....	.....	56.5	87	.....	22	.....	65	3.37	1.48	.....	0.4	SW	12	10	8
Central Counties	.....	.....	.....	57.4	86	.....	25	.....	61	1.36	0.59	.....	T	SW	12	10	8
Southern Counties	.....	.....	.....	62.4	89	.....	27	.....	62	0.71	0.40	.....	0	SW	12	13	5
State	.....	.....	.....	58.8	87	.....	24	.....	63	1.81	0.82	.....	0.2	SW	12	11	7

The time noted herein is that of the 90th meridian. Wherever Self-Registering thermometers (b) are used the extremes of temperature are noted from these, elsewhere from observed readings. The different hours from which the monthly means are obtained, are indicated by 1, from maximum and minimum observations, 2, from the 7 a. m. and 7 p. m. observations; 3, from the 7 a. m., 2 p. m., and 9 p. m. observations; and 4 from observations of other hours. a. Observations are taken at 7 p. m., 2 b. m. and 9 p. m. b. Maximum and minimum. c. At 7 a. m. and 7 p. m. d. Indicates that observations on Sunday are not made.

## COMPARATIVE TEMPERATURE AND PRECIPITATION FOR APRIL, 1896.

COUNTIES.	STATIONS.	TEMPERATURE—DEGREES—FAHRENHEIT.										PRECIPITATION—INCHES.									
		Number of Years	Normal.	Highest Mean on Record.	Year.	Lowest Mean on Record.	Year.	Highest.	Year.	Date of Month.	Lowest.	Year.	Date of Month.	Departure from the Normal.	Number of Years	Normal.	Highest.	Year.	Lowest.	Year.	Departure from the Normal.
SOUTHERN.....		13	53.9	62.4	1896	51.5	1884	91	1894 1896	29-30 17	12	1875	17	+6.5	13	3.91	9.06	1893	0.71	1896	-3.29
Dubois.....	Huntingburg.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....	.....	.....
Gibson.....	Princeton.....	14	55.1	60.6	1896	51.8	1884	91	1894	29	20	1887	1	+5.5	14	3.35	8.64	1893	0.80	1889	-1.00
Crawford.....	Marengo.....	15	57.4	62.8	1896	52.3	1884	91	1894	30	19	1887	1	+5.4	15	6.38	16.60	1893	0.30	1896	-6.08
Switzerland.....	Vevay.....	32	54.6	63.4	1896	52.1	1884	91	1896	17	12	1875	17	+8.8	32	3.53	9.23	1893	0.22	1896	-3.31
Jennings.....	Butlerville.....	12	55.1	61.5	1896	52.5	1892	90	1887 1890 1894	13 18 30	23	1896 1891	4 5	+6.4	12	3.58	8.28	1893	0.43	1896	-3.15
Greene.....	Worthington.....	15	54.3	61.4	1896	50.9	1884	89	1896 1896	16	25	1891 1896	4	+7.1	15	3.70	8.45	1893	0.61	1896	-3.09
Jackson.....	Seymour.....	9	55.2	60.4	1896	52.7	1889	87	1896	15-17	25	1896	3	+5.2	9	3.50	9.22	1893	0.25	1896	-3.25
Bartholomew.....	Columbus.....	13	54.0	59.4	1896	50.2	1892	87	1896	16-20	24	1896	4	+5.4	13	3.02	8.70	1893	0.21	1896	-2.81
Jefferson.....	Madison.....	3	58.4	63.2	1896	55.6	1894	89	1896	16-18	27	1896	4	+4.8	3	3.49	8.15	1893	0.28	1896	-3.21
Posey.....	Mt. Vernon.....	9	57.7	64.7	1896	54.6	1892	90	1894 1896	30	29	1892	10	+7.0	9	3.80	8.95	1893	0.98	1889	-1.26
Clark.....	Jeffersonville.....	7	57.9	63.7	1896	55.5	1894	90	1896	17	29	1892	11	+5.8	7	4.08	8.22	1893	0.24	1896	-3.84

CENTRAL.....	13	52.5	57.4	1896	48.6	1884	90	1894	30	15	1885	8	+4.9	13	3.44	9.14	1893	1.36	1889	-2.08
Johnson.....	14	53.2	59.5	1896	48.6	1884	88	1896	17	26	1887	5	+6.3	14	2.97	7.25	1893	0.97	1896	-2.00
Fayette.....	15	51.5	58.4	1896	42.2	1885	89	1888	29	23	1891	5	+6.9	15	3.27	9.95	1893	0.82	1885	-2.00
Marion.....	25	52.5	60.0	1896	45.8	1874	87	1896	16	26	1892	11	+7.5	25	3.59	8.60	1893	1.27	1896	-2.32
Wayne.....	4	52.5	57.5	1896	49.5	1892	85	1896	18	22	1892	11	+5.0	4	4.04	9.53	1893	1.18	1896	-2.86
Vigo.....	4	57.2	61.8	1896	54.1	1893	90	1894	30	28	1893	15	+4.6	4	4.06	8.37	1893	1.41	1896	-2.65
Rush.....	16	50.6	58.2	1896	47.4	1884	87	1896	16	15	1886	5	+7.6	16	3.26	9.11	1893	1.02	1896	-2.24
Parke.....	10	53.9	59.5	1896	50.6	1892	88	1894	30	20	1891	5	+5.6	10	3.75	9.86	1893	1.05	1889	-2.17
Randolph.....	15	51.0	58.6	1896	40.0	1885	86	1883	14	24	1885	4	+7.6	15	3.30	10.79	1893	1.07	1889	-1.10
NORTHERN.....	13	50.5	56.5	1896	46.5	1884	90	1887	13	8	86-89	5-6	+6.0	13	3.10	7.19	1893	0.88	1889	+0.27
Tippecanoe.....	17	51.1	57.9	1896	45.4	1881	88	1895	30	13	1881	5	+6.8	17	3.62	9.65	1893	0.84	1889	-0.97
Whitley.....	12	49.9	55.4	1896	46.4	1889	85	1895	30	18	1887	5	+5.5	12	3.10	6.29	1893	1.03	1895	-0.69
Steuben.....	12	48.6	54.9	1896	43.4	1892	90	1896	28	20	1886	4	+6.3	12	3.13	7.31	1893	1.09	1895	+2.78
Grant.....	10	52.0	57.4	1896	48.9	1892	87	1896	16	15	1892	9	+5.4	10	3.16	8.45	1893	0.50	1889	-0.05
Cass.....	12	51.1	59.7	1896	46.5	1892	89	1888	29	22	1891	8	+8.6	12	3.43	7.29	1864	1.42	1874	-0.63
Carroll.....	12	51.0	55.0	1886	47.7	1893	90	1887	13	8	1891	8	+4.0	12	3.55	7.47	1893	0.81	1889	-0.93
Huntington.....	3	53.9	56.8	1896	52.5	1894	87	1896	16	24	1896	2	+2.9	3	2.29	3.20	1894	0.85	1895	+0.53
Porter.....	4	49.3	54.6	1896	44.2	1893	87	1896	16-17	19	1896	2	+5.3	3	3.04	4.16	1893	1.95	1895	+0.30
Howard.....	4	52.7	58.1	1896	50.4	1893	89	1896	16	21	1896	2	+5.4	4	4.43	8.42	1893	1.88	1895	-0.31
STATE.....	15	52.9	58.8	1896	48.7	1884	91	1894	29-30	8	1891	8	+5.9	15	3.50	8.46	1893	0.81	1889	-1.69





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INDIANA  
CLIMATE AND CROP SERVICE

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THE AGRICULTURAL EXPERIMENT STATION

AT

PURDUE UNIVERSITY

CO-OPERATING WITH

U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU.

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JULY, 1896.

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H. A. HUSTON, DIRECTOR.

Purdue University, LaFayette, Ind.

C. F. R. Wappenhans, Local Forecast Official Weather Bureau, Assistant Directo

Reports and all communications from Observers relating to the Indiana Climate and Crop Service should be addressed, under the frank to C. F. R. Wappenhans, Local Forecast. Official Weather Bureau, Indianapolis, Ind.

## JULY, 1896.

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Moderately warm weather prevailed during the month, and the average temperature is near normal, only 0.4 degree in excess. Warm periods occurred on the 3d and 4th, from the 11th to the 14th and from the 26th to the 29th. The number of days on which there was an excess were nearly equal the number of days when a deficiency occurred. The mean temperature at the different stations ranged from 70.0 to 79.3 degrees, and the normals of temperature ranged from 71.6 to 77.5 degrees. The maximum temperatures ranging from 91 to 100 degrees, were recorded in the southern and central portions of the State at most stations on the 29th, and in the northern portion on the 13th and 14th. A slight excess in temperature occurred at most stations, but at some of them a slight deficiency is noted. In the southern portion an excess of 1.4 degree occurred, with the departures from the local normal ranging from + 1.8 to - 0.6 degree; in the central portion the departure from the normal is - 0.2 degree, and the departures ranged from + 1.2 to - 0.7 degree; in the northern portion there is a deficiency of 0.5 degree, with the local departures ranging from + 1.8 to - 2.0 degrees. The highest monthly means of temperature for any month of July on record occurred at most stations in the year 1887, and the means ranged from 74.5 to 85.8 degrees; the lowest monthly means for July were noted at most stations in 1891. The highest temperatures observed, ranging from 96 to 106 degrees, were noted at most stations in 1887, and the lowest temperatures for July, ranging from 41 to 55 degrees, were recorded nearly everywhere in the year 1895.

The precipitation during July was very excessive, local rains fell on many days and heavy rains in localities were quite frequent. The total amounts ranged from 2.88 inches to 12.20 inches, and the local normals extend from 2.04 to 4.90 inches. The greatest amounts in any consecutive 24 hours, ranging from 0.98 to 6.50 inches, were recorded from the 19th to the 21st. The total amount for the State and in all sections was very much in excess, and deficiencies occurred only in the southern portion at Mt. Vernon and Marengo. The excess for the State is 4.27 inches; the greatest excess is noted in the northern portion, 5.67 inches, with the local excess ranging from 3.79 to 9.22 inches; in the central portion the excess is 4.78 inches and the local excesses ranged from 1.39 to 8.34 inches; the least excess, 2.69 inches, is noted in the southern portion, with the departures from the normal ranging from - 0.75 to + 6.07 inches. The greatest amounts of monthly precipitation for any month of July on record, the amounts ranging from 6.19 to 13.12 inches, were recorded nearly everywhere in this year, and the

least measurements, ranging from 0.03 to 2.95 inches, were noted at most stations in 1893 and 1894.

Hail fell during thunder storms in few localities. Thunder storms were quite numerous, and especially those on the 23d were violent with very heavy local rains. Very many houses and barns were struck by lightning and were destroyed. Many people and very many horses and cattle were killed.

The rains at the beginning were beneficial to crops in general, but especially to corn, which at the end of the month promises great yield; but when so many rains continued to fall much damage was done by them. Wheat, oats and rye in shock rotted and began to sprout; hay was ruined, and potatoes and vegetables began to rot. The rivers and creeks overflowed their banks and inundated many fields of corn and ruined them.

## OBSERVERS' REMARKS

NORTHFIELD, Boone Co.—Frequent rains in the latter part of the month have done considerable damage to wheat and oats in this county, causing the grain in shock to sprout and the straw to rot. Corn at the end of the month looks well and promises a heavy crop. Potatoes look well, but the ground is too wet to dig the early varieties, which are ripe.

SUNMAN, Ripley Co.—The excessive rainfall seriously injured oats after it was put in shock. The hay crop is light, but it has been secured in good condition. Corn promises a full crop, with a large acreage. Pasturage is in good condition.

SEYMOUR, Jackson Co.—July 1896 was abnormally hot and wet. All growing crops advanced rapidly, but much of the wheat and oats were badly damaged by the rain. Melons, hay and fruit, apples excepted, are large and fine crops. At the end of the month all threshing and most of the hay harvesting is completed, and fall plowing has commenced with the soil in fine condition; about the usual fall acreage will be cultivated. Much of the corn will soon be past the danger from frost, and generally the crop outlook is good.

MARION, Grant Co.—Normal temperature and excessive rainfall occurred during the month. The rains injured almost half the wheat crop and nearly all the oats crop, and potatoes are rotting. A heavy wind on the 28th did much injury to corn in parts of the county.

VEVAY, Switzerland Co.—The month was noticeable for its heavy rainfall, the amount being 3.41 inches in excess. Heavy rains have injured crops; tomatoes, potatoes and vegetables are rotting and oats and hay are mildewing. From the 19th to the 24th rain every day and thunder storms. A very heavy storm on the 30th did much damage in this locality; 0.90 inch of rain fell in 45 minutes.

LACONIA, Harrison Co.—The excessive rainfall of the month did great damage to growing crops on low lands and creek bottoms. The Ohio river has been higher than for a number of years, materially injuring crops along its banks and the banks of its tributaries.

DELPHI, Carroll Co.—Thunder storms were reported at various places throughout the county on the 15th. Heavy rains prevailed during the latter part of the month; the rainfall of the 20th was the heaviest for seven years. Very heavy rain fell on the 27th about 12 miles from Delphi, and several barns were struck by lightning.

TERRE HAUTE, Vigo Co.—On the 24th about 3 a. m. a strong wind storm passed over the southern part of the city, and the heaviest rain fell for years; several barns were blown down and the residence of William Norris was lifted from its foundation and landed



in the middle of the street car track 200 feet away. Mr. and Mrs. Norris, the only occupants of the house, were severely injured. Some of the contents of the house were found eight blocks away. The heavy rains have destroyed bridges at a loss of \$25,000.

BEDFORD, Lawrence Co.—On the night of the 23d, and in the morning of the 24th very heavy rain fell, accompanied by wind which still increased the injury to harvested crops. Much of the wheat is still in shock or stack and is sprouting; threshing has been delayed on account of the unusual wet weather at this time of the year. Corn and oats are in good condition. Grass is abundant, and fruit of all kind is a glut in the market.

BLOOMINGTON, Monroe Co.—The heaviest rain for several years fell here on the night of the 23d. Low lands were inundated, culverts were swept away, and thousands of acres of corn were destroyed. An immense amount of hay in this county was damaged by rains.

LOGANSPOUT, Cass Co.—A heavy rain storm passed over the county on the night of the 23d. Nearly two inches of rain fell in about 30 minutes, and the Eel and Wabash rivers rose four feet. The rain was preceded by violent wind, which leveled hundreds of acres of corn.

ROCKPORT, Spencer Co.—On the night of the 21st very heavy rain fell about six miles west and did much damage to property. Willow pond and a swamp that had been drained, and then was the best land, was inundated ten feet deep, and people were driven from their homes. Crops were ruined.

FARMLAND, Randolph Co.—July was very wet; more rain fell during the month than in any month in many years. Crops are being damaged by the wet weather; wheat, oats and corn are all damaged. The storms have been general, but not severe in the county.

PRINCETON, Gibson Co.—At the end of the month wheat is not all threshed on account of wet weather, and much of it is damaged. Corn looks well on hill land; much of the corn on bottom lands is ruined. Pasturage is good and peaches and grapes are abundant, but the apple crop is small. Plowing had commenced at the end of the month.

SYRACUSE, Kosciusko Co.—The rains from the 13th to the end of the month have done much damage to oats and wheat in shock as well as to corn and hay on low ground. Corn promises an exceedingly large yield; apples, pears, peaches and grapes are very abundant.

COLUMBIA CITY, Whitley Co.—The heavy rains from the 19th to the close of the month were not accompanied by thunder until near the end of the month. On the morning of the 22d between 5 and 8 a. m. there fell 3.15 inches of rain, which quickly raised all small streams and flooded the low lands.

KNIGHTSTOWN, Henry Co.—A beautiful phenomena, part of a solar halo, was observed on the 30th; after a thunderstorm the sun shone out just from under the edge of a heavy cloud, and color of a solar halo ring was noted through cirrus stratus clouds, the sun being obscured, but one could not look at the halo without a screen, it being so bright; the edges of the great cumulus stratus cloud looked like silver.

ANDERSON, Madison Co.—A heavy rain storm on the morning of the 28th, with much lightning, light wind only and some hail; 1.01 inches of rain fell in an hour, and most of it in 20 minutes. The days following were warm, damp and sultry.

CAMBRIDGE CITY, Wayne Co.—Corn at the end of the month is in best condition and benefited by rains. Potatoes were injured by too much rain. In some fields wheat and oats were damaged by rain. Plums are abundant and good. The heaviest rains passed north and south from the city.

BUTLERVILLE, Jennings Co.—The rain fall during the month was excessive. At the close of the month hay is about all cut; corn in fine condition; buckwheat looks well; summer apples were abundant and grapes a large crop.

WORTHINGTON, Greene Co.—The rains during the month were very excessive and destroyed corn much in low bottom lands, and damaged oats; hay also was injured more or less.

MAUZY, Rush Co.—On the 28th a rain and wind storm passed with some small hail; the wind blew down trees, etc., and some stock was killed by trees falling on them. On the 30th another wind and rain storm did damage; in 35 minutes 0.97 inch of rain fell, and in many fields the corn blades were cut by hail.

BLUFFTON, Wells Co.—A storm on the 29th did much damage to roofs of buildings, and hail fell, some of the stones weighing 18 ounces.

SOUTH BEND, St. Joseph Co.—The rains commencing on the 18th damaged wheat, oats and rye in shock and stack, but they were beneficial to all growing crops.

ANGOLA, Steuben Co.—The month of July has been one of the most wet for years, and much damage has been done to crops, and the streams were the highest; the rains benefited growing crops, but crops were hard to secure. The corn crop will be immense, the greatest crop for years; the wheat crop was poor and injured by much rain.

MADISON, Jefferson Co.—Noted a solar halo on the 8th. The river has been very high, overflowing the low lands; it did much damage.

TIPTON, Tipton Co.—Severe thunder storms on the night of the 27th lasted about 10 hours. Floods on the 28th and 29th did much damage.

CONNERSVILLE, Fayette Co.—The month was very wet and many storms did damage; wheat and oats sprouted in shock; weeds are growing very rank.

ATLANTA, Hamilton Co.—Five inches of rain fell on the night of the 23d; no such downpour has been known for many years; oats in shock are in bad condition.

## STATE SUMMARY.

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 JULY, 1896.
 

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TEMPERATURE (deg. F.)—Monthly mean 75; highest monthly mean 79.3 at Vevay; lowest monthly mean 7.07 at Marion; maximum, 100 at Angola on the 3d, Huntington and Evansville on the 30th, and Vincennes on the 27th and 29th; minimum observed 42 at Hammond on the 16th; range for State, 58; mean monthly range, 43; greatest local monthly range, 53 at Hammond; least local monthly range, 34 at Edwardsville and Valparaiso.

PRECIPITATION (in inches): Average for State, 7.61; greatest amount 12.78 at Angola; least monthly 2.88 at Huntington.

WIND.—(Prevailing direction,) SW.

THUNDERSTORMS.—(date): 1, 2, 3, 4, 12, 13, 14, 15, 19, 21, 22, 23, 24, 26, 27, 28, 30.

HAIL.—(date): 3 and 23 at Seymour; 27 at Worthington; 28 Marion, Anderson, Kokomo, Huntington; 30 at Knightstown.

DENSE FOG.—(date): 21 at LaFayette.

SOLAR HALO.—8 and 30.

AURORA.—(date): 26 at Syracuse.

PLACE OF OBSERVATION.			TEMPERATURE—DEG. FAH.				PRECIPITATION.				NUMBER OF DAYS			NAME OF OBSERVER					
STATION.	COUNTY.	Altitude Above Sea in Feet.	Latitude North.	Longitude West.	Monthly Mean.	MAXIMUM	MINIMUM	Total for month including melted snow.	Greatest in 24 consecutive hrs.	Snow fall in inches.	Prevailing direction of winds.	Cloudless	Partly Cloudy		Cloudy	On which rain or snow fell.			
			N.	W.		Degrees.	Date.	Degrees.	Date.										
SOUTHERN, Huntington.	Dubois .....	b1 430 38° 21' 86° 59'			...	..	....	..	..	....	....	..	..	..	..	C. R. Kluger.			
Mt. Vernon...	Posey .....	b1 410 37° 58' 87° 54'			79.3	100	30	55	16	2.88	1.60	19	....	W	15	5	5	W. H. Fogas.	
Laconia.....	Harrison. .	a 38° 03' 86° 08'			78.3	96	29	55	18	6.80	4.00	20-21	....	SW	15	10	6	5	Lafe Croster.
Jasper.....	Dubois .....	b1 450 38° 25' 86° 58'			77.8	99	29-30	53	18	4.00	1.46	20	....	....	13	6	12	6	Gus Grumelspacher
Princeton....	Gibson.....	a b 481 38° 23' 87° 35'			77.2	99	30	56	18	4.00	1.50	21	....	SW	21	8	2	7	Elisha Jones.
Marengo .....	Crawford....	a 363 38° 24' 86° 24'			77.6	98	30	52	18	4.64	1.60	22	....	SW	15	10	6	7	J. M. Johnson.
Vevay .....	Switzerland. .	a b1 525 38° 46' 84° 59'			78.3	97	29	59	16	7.50	1.25	2	....	SW	5	9	17	10	Chas. G. Boerner.
Butlerville....	Jennings.. .	b1 767 39° 3' 85° 53'			75.7	96	29	49	8	8.75	4.12	20-21	....	S	16	7	8	10	C. F. Hole.
Worthington.	Greene.....	b c1 540 39° 9' 87° 0'			75.2	94	29	50	18	7.43	1.49	24	....	....	9	15	7	11	Dr. W. B. Squire.
Bedford.....	Lawrence ..	b1 681 38° 52' 86° 31'			...	..	..	..	..	....	....	..	....	....	..	..	..	..	John Johnson, Jr.
Seymour ...	Jackson.....	b1 610 38° 45' 86° 31'			76.7	98	30	54	17	4.61	1.10	19	....	....	9	17	5	10	John A. Forsythe
Columbus....	Bartholomew.	b1 632 39° 13' 85° 56'			74.8	94	23-30	50	17-18	8.33	3.08	20	....	SW	17	6	8	11	J. A. Perry.
Jeffersonville	Clark.....	a b1 455 38° 16' 85° 45'			77.9	97	28-30	52	18	10.75	3.71	20 21	....	W	12	12	7	12	John C. Loomis.
Edwardsville.	Floyd .....	a b1 901 38° 19' 85° 56'			78.3	94	30	60	17	7.72	2.10	4	....	SW	15	12	4	9	Jonathan Beard.
Summan .....	Ripley .....	3 1018 39° 14' 85° 6'			73.3	92	29-30	50	17-18	7.47	2.45	0-21	....	SW	10	12	9	12	B. F. Ferris.
Evansville ...	Vanderburg..	b1 383 38° 00' 87° 38'			79.0	100	30	55	17	5.33	2.75	21	....	SW	20	3	8	8	Lewis J. Ahlering.
Vincennes...	Knox.....	b1 431 38° 47' 87° 33'			77.0	100	27-29	50	7	5.44	2.10	20	....	....	20	..	11	8	J. T. McInsey.
Madison .....	Jefferson. ....	b1 400 38° 44' 85° 27'			76.8	96	29	55	17-18	7.65	1.42	21	....	SW	14	3	14	12	W. P. Gosnell.
Scottsburg ..	Scott.....	a 570 38° 42' 85° 41'			77.8	97	29	54	18	4.66	0.98	24	....	SW	14	8	9	8	F. N. Park.
Greensburg ..	Decatur .....	854 39° 21' 85° 25'			...	....	....	....	....	5.90	1.08	20	....	....	8	..	8	8	Charles Weslitt.
Washington..	Daviess.....	b1 484 38° 42' 87° 11'			76.8	98	30	56	18	3.33	1.96	20	....	....	22	6	3	8	Geo. S. Walters.
Mean.....	.....	.....			77.1	97	....	54	..	6.13	2.69	....	....	SW	15	8	8	9	
CENTRAL, *Franklin....	Johnson .....	a 740 39° 30' 86° 13'			...	..	..	..	..	....	....	..	....	....	..	..	..	..	D. A. Owen.
Connorsville.	Fayette.....	b1 844 39° 40' 85° 3'			73.7	92	30	50	17	7.31	1.27	9	....	SW	5	22	4	13	H. Hessler.
Indianapolis	Marion.....	1 766 39° 47' 86° 11'			75.9	96	29	54	17	5.72	2.95	19-20	....	SW	8	17	6	15	C. F. R. Wappenbans
Mauzy .....	Rush.....	b1 980 39° 38' 85° 24'			73.8	92	27-30	50	18	7.69	2.97	20-21	....	....	7	10	14	14	E. Kirkwood.
Bloomington.	Monroe.....	b1 744 39° 12' 86° 32'			77.0	98	30	54	17	7.78	2.60	23	....	NW	22	..	9	8	J. F. Blewett





## COMPARATIVE TEMPERATURE AND PRECIPITATION FOR JULY, 1896.

COUNTIES.	STATIONS.	TEMPERATURE—DEGREES—FAHRENHEIT.										PRECIPITATION—INCHES.									
		Number of Years	Normal.	Highest Mean on Record.	Year.	Lowest Mean on Record.	Year.	Highest.	Year.	Date of Month.	Lowest.	Year.	Date of Month.	Departure from the Normal.	Number of Years	Normal.	Highest.	Year.	Lowest.	Year.	Departure from the Normal.
SOUTHERN.....	.....	13	75.7	81.7	1887	73.8	1891	106	1887	18	44	1895	31	+1.4	13	3.44	6.26	1889	1.41	1894	+2.69
Dubois.....	Huntingburg.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....	.....	.....
Gibson.....	Princeton.....	14	77.0	82.2	1887	73.6	1886	103	1887	30-31	51	1895	31	+0.2	14	3.04	7.60	1895	0.95	1894	+0.96
Crawford.....	Marengo.....	15	76.6	81.1	1887	73.7	1891	105	1887	20	50	1885	2	+1.0	15	4.90	9.85	1889	1.50	1894	— .26
Switzerland.....	Vevay.....	32	76.7	85.8	1868	71.6	1891	97	1881	10	50	1895	10-31	+1.6	32	4.09	9.80	1874	0.60	1894	+2.92
Jennings.....	Butlerville.....	12	75.7	83.6	1887	72.1	1883	106	1887	18	44	1895	31	0.0	12	3.38	8.75	1896	0.57	1887	+5.37
Greene.....	Worthington.....	15	74.4	81.1	1888	72.8	1895	100	1887	18	48	1895	10	+0.8	15	3.67	7.43	1895	0.89	1894	+3.76
Jackson.....	Seymour.....	9	76.0	78.7	1893	72.5	1891	98	1896	30	50	1895	31	+0.7	9	3.39	6.76	1883	0.45	1894	+1.22
Bartholomew.....	Columbus.....	13	75.4	81.3	1887	70.5	1891	104	1887	14-28 30-31	45	1895	31	-0.6	13	2.76	8.33	1896	0.19	1890	+5.57
Jefferson.....	Madison.....	3	77.1	81.1	1893	74.4	1895	98	1893	25	50	1895	31	-0.3	4	3.87	7.65	1896	2.14	1894	+3.78
Posey.....	Mt. Vernon.....	9	77.5	81.1	1889	73.9	1891	100	1887	18	55	1895	31	+1.8	9	3.63	9.17	1885	0.89	1894	-0.75
Clark.....	Jeffersonville.....	7	76.7	81.4	1893	73.9	1891	98	1893	25	52	1896	18	+1.2	7	4.08	10.95	1896	2.95	1894	+6.07



CENTRAL.	13	74.7	79.8	1887	71.2	1891	105	1-88	21	42	1885 1895	1	-0.2	13	3.09	7.87	1896	1.07	1890	+4.78
Johnson	14	.....	.....	.....	.....	.....	..	.....	..	..	.....	..	.....	14	.....	.....	.....	.....	.....	.....
Fayette	15	74.2	75.9	1887	68.7	1891	99	1887	18-31	45	1892	1	+0.5	15	2.72	7.31	1895	0.03	1890	+4.59
Marion	25	76.2	80.6	1889	71.9	1891	101	1881	10	48	1885	28	-0.3	25	4.33	13.12	1875	0.82	1881	+1.39
Wayne	5	73.7	75.5	1892	7.12	1895	96	1895	19	43	1892	1-4	-0.7	5	2.7	6.00	1896	0.42	1895	+3.30
Vigo	5	76.9	78.4	1894	75.0	1895	99	1893	24	51	1895	10	+0.4	5	4.06	7.29	1896	1.73	1893	+3.29
Rush	16	72.6	78.0	1893	67.5	1883	101	1887	30	42	1885	1	+1.2	16	2.66	7.69	1896	0.27	1894	+5.03
Parke	10	74.8	82.5	1887	71.5	1891	102	1887	14	43	1895	10	1.2	10	3.44	8.85	1896	0.30	1887	+5.41
Randolph	15	73.1	78.0	1887	65.	1883	102	1887	30	44	1895	30	-0.1	15	3.49	11.83	1896	0.5	1894	+8.34
NORTHERN	13	73.9	79.9	1887	69.2	1891	105	1887	13-30	41	1891	30	-0.5	13	3.17	8.84	1896	1.01	1893	+5.67
Tippecanoe	17	74.3	79.8	1887	69.9	1882	105	1887	13-30	42	1891	31	+0.2	17	3.08	10.73	1896	0.88	1887	+7.05
Whitley	12	73.4	78.9	1887	69.5	1891	97	1887	13	44	1894	7	-1.4	12	3.30	12.20	1896	1.19	1890	+8.90
Steuben	12	74.8	77.9	1887	71.3	1891	104	1894	19	45	1895	10	+0.2	12	3.56	12.78	1896	0.62	1890	+9.22
Grant	10	73.3	79.6	1887	70.7	1896	100	1894	18	41	1891	30	-2.6	10	2.04	6.19	1896	0.47	1893	+4.15
Cass	12	75.0	81.8	1887	69.7	1884	104	1887	17	43	1890	9	-2.0	12	2.97	7.04	1896	0.54	1894	+4.07
Carroll	12	74.0	84.5	1887	66.2	1891	104	1887	17	41	1891	31	+0.6	12	3.42	7.61	1896	0.41	1893	+4.19
Huntington	3	71.6	75.4	1894	72.2	1895	96	1894	18	45	1895	30	+1.8	3	4.38	11.08	1896	0.39	1894	+5.70
Porter	4	72.4	74.5	1893	69.8	1894	98	1894	19	42	1894	22	+1.0	3	3.77	7.56	1896	0.81	1893	+3.79
Howard	4	74.8	75.7	1896	73.3	1893	98	1894	18	45	1895	31	+0.9	4	3.42	9.17	1896	0.86	1893	+5.75
STATE.	15	74.6	80.5	1887	70.9	1882	106	1887	18	41	1891	30	+0.4	15	3.34	7.61	1896	1.43	1894	+4.27

